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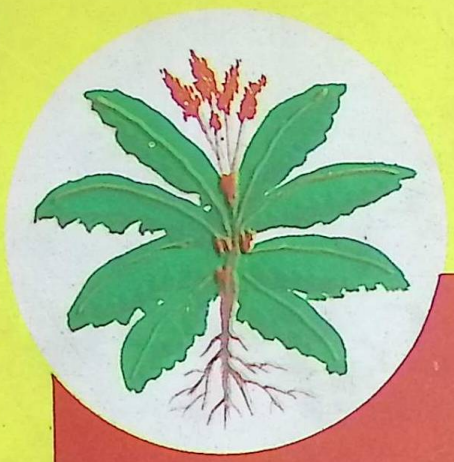

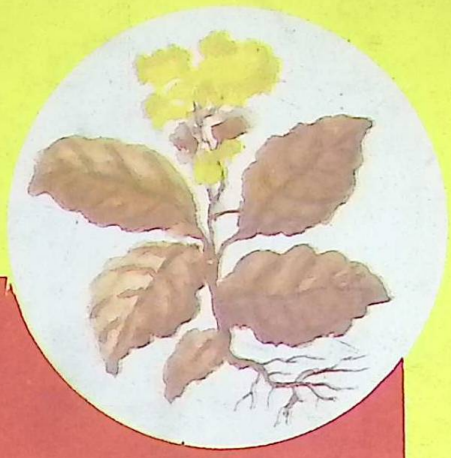

FOUNDATIONS OF AYURVEDA

AN ANTHOLOGICAL APPROACH

K.H. Krishnamurthy

a BR Publication

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Medicine is a science. Its practice is an art however deep is a physician's knowledge. Every clinical state is rather unique and demands an empathic skill by him. It demands constant and actual experience as well as devoted attention to the individual human being. It has overtones, in fact, to the very attitude a person has towards life and his own. Here are the relevant social order and the resolution of its disruptive effects on the individual man. The sweep of modern medicine is thus almost all embracing.

The book, executed as a project of the University Grants Commission, examines this possibility anthologically. It does so from as wide a range of Sanskrit sources as felt necessary. This includes the Vedas, the Edicts, the Upanishads, the Dharma-shastras and the Darshanas besides many classical texts on ayurveda and their commentaries and so on. The highly rationalistic modern mind would be more impressed if it is made to acquaint itself as directly as possible with the original statements of the sanskrit authors. This is why the anthological method is choosen towards this objective. This involves effective selection of the sources and quotations in sanskrit, arranging them in an order best conducive to their appreciation by students of modern medicine.

Experiment is a purposeful manipulation of the circumstances to check the veracity of our hypothesis. In this sense, science is probably new to ancient Indian ethos or rather to human civilisation itself. The book is an attempt to demonstrate this thesis.

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FOUNDATIONS OF AYURVEDA

An Anthological Approach

K.H. Krishnamurthy

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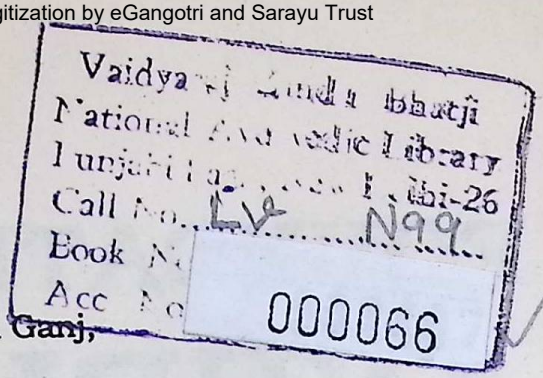

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FOREWORD

The scientific achievements of India in the millennia before and after Christ are not fully known to the scientific world because of many reasons, the chief of them being the foreign invasion of India by the Muslims and later by the Europeans. During this dark period of Indian history, the achievements of the earlier years were either suppressed or assimilated by the ruling races. During the European occupation, the rulers could not concede that anything worthwhile existed in India or anywhere in the World before the Greeks from the European civilisation is supposed to have taken roots. This teaching is found all over the West and has also been dinned into the subject race through the Western System of education. Thus even now, most of the intelligentsia of our country do not know about the great achievements in many aspects of science in India before 1000 A.D. These achievements have been in the field of mathematics, astronomy, metallurgy, medicine etc. For example, in the field of mathematics, there have been contributions even in the vedic period. The VEDANGA JYOTHISHA of Lagadha and the SULBA SUTHRAS have indicated knowledge which is now known as the Pythagoras theorem. (Rengachari --INSA NEWS March 1988). This is just one example. Similarly in the field of medicine and medical education, India had achieved great heights of knowledge and thinking, about which little is known to the public or to the medical men of India. Modern medical doctors of India are unfortunately quite ignorant of our achievements in these fields, specially because of the prejudice that has been created in their minds by their teachers, who also believed that all medical knowledge originated only from the Greeks and later from the Arabs.

Dr.K.H. Krishnamurthy, in this book has undertaken the most important task of providing us with the scientific knowledge and background of Indian Medicine, by studying the original Sanskrit Texts. Dr. Krishnamurthy has extensive knowledge of the subject as well as Sanskrit. Working in the Jawaharlal institiute of Post Graduate Medical Education and Research in Pondicherry, he has written a book, the "Wealth of Susrutha" and books on "Brain, Mind and Speech" and "Principle and Methodology of Modern Science".

The present anthology of Indian medicine covers a wide aspect of the science of life (Ayurveda) and deals with qualities of a physician, medical education and learning, and organisation of medical services. The philosophical and historical backgrounds are well presented and the chapters include medical principles, health and hygiene, dietetics, medicine, surgery and references to the classics and the Vedas.

By widely quoting the original Sanskrit Texts and by giving a true and understandable translation, he has provided us with a mine of invaluable information, which will serve as a source book as well as a reference book. This anthology must be studied and referred to by all medical scientists of our country and also by the

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medical educationists. The book is also of importance to historians and Sanskrit lovers. It sheds light on the great achievements and the scientific level of thinking in India, in the earlier years of our history.

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Preface

This is an attempt at an anthological presentation of the sources of thinking on Medicine as it developed in India since ancient times. Medicine is interpreted here in its broadest sense as the World Health Organisation also recognises now, namely, that it is not concerned mereley with curing of the sick but is actively involved in establishing man at his best and positive health - psychological, social and even spiritual. Thoughts of value as concerning all of these aspects - basic as well as somewhat technical - are collected from a wide source of Indian writing in Sanskrit. Materials concerned with many other facets of Medicine, such as education, pedagogy, philosophical background, service organisation and history, are also included. One objective is to demonstrate with authoritative statements from original Texts that much of all this was cultivated in India continuously and purely scientifically. In addition, though this was done several thousands of years ago, they are often refreshingly relevant if not seminal even now. The term science is taken here to mean an organised, purely rationalistic, verifiable body of knowledge that also happens to be of value in practical fields such as Medicine. In any chosen field science grows historically at certain clearly recognisable steps: close observation, deep reflection, efficient classification, valid theorisation, technically competent expression plus experimentation and technology. Excepting the last two, which is what distinguishes modern science from the ancient, the details of all the others are clearly discernible in Sanskrit technical writing and are attempted to be depicted here as regards the Science and Art of Medicine.

This work is meant mainly for non-Sanskrit knowing readers of modern Medicine who desire to be informed of these matters as expressed originally in the words of the classical masters in their own vigour, vitality, brevity, beauty and uniqueness of style. The translations provided endeavour to retain all these latter features along with additional material where needed to render the originals lucid and homely for the present day workers. It is believed that it is the absence of such attempts that has prevented them from being appreciated to the extent they deserve. A specific method of presentation is adopted as explained separately to show that these ancient technical writings are wholly comparable to the rigorous techincal writing of modern science. In general, the translation is not only put in the language and diction of modern science but also in full faithfulness ot the originals.

Quotations constitute isolated statements of classical authors selected for their significance, authoritativeness, representativeness, brevity, pithiness of expression and relevance to the present context. They are best considered as but tips of icebergs whose full extent is revealed only to a reader who can treat them as not merely informative but also educative. They will then form a rich and fertile material that would continue to yield fresh and valuable meanings depending upon the interest, the maturity and the contemplative calibre of the readers who are invited to subject the material provided here for such an exercise.

In Ayurveda this work confines merely to some selected basic aspects. As such,

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the details of individual diseases, specific medicines and plants or specialised branches such as toxicology, paediatrics and so on, on which also valuable information can be gathered from ancient Texts are wholly omitted. The aim is to only highlight the fully rationalistic background of the Science and Practice of Medicine and the rigorous and the technically efficient way in which they have found their expression. Within this limitaiton however the extent of the quotations selected is quite considerable. This is to enable the reader to appreciate the matter in an in - depth way rather than superficially and dissectedly.

It is hoped that this endeavour of the author to bring the past to the limelight of the present would offer the necessary conceptual link to earnest workers which is the best guarantee for a vibrant revival of our technical heritage.

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Plan of Work

a. *Translation.* A meticulous method is adopted as follows, generally throughout. The words within the brackets denote, (i) if not *italicised*, what the Text implies but does not state so, explicitly; (ii) if *italicised*, extrapolate, slightly, to explain the matter more properly to ourselves now and, (iii) *if they are Sanskrit words,* draw particular attention to some specific word/words of the Text. The words outside the brackets constitute the translation proper of the Sanskrit original. Care is taken to see that the net composition including what is within the brackets forms a smoothly flowing and not a jerky reading matter. This procedure is presumed to be best suited to appreciate our ancient scientific Texts in modern times succinctly provided we go about our task judiciously and do not extrapolate beyond what the Texts sanction. Where needed, we add an explanatory note in a separate paragraph/s after the translation of the *śloka* concerned.

The final format is still kept epigrammatic and not lax so that the style of the original is also not changed unnecessarily. The aim is to aid the reader to get a direct acquaintance with the original thinkers in all their richness of implications plus the vigour and the beauty of expression.*

b. *Presentation*. The quotations are distributed as shown in the contents into several suitably titled and numbered chapters, heads, and subheads (which are often divided further similarly in the Text of the Anthology though not shown in the contents). This is to aid easy locateability and qucik grasping (of the quotation) which is what is needed in a voluminous anthology like this for efficient use. In addition, the texts in a chapter are separately numbered as well serially so as to aid in indexing and extraction. This number however often includes more than one *ślokas* when related in terms of their subject.

c. *Perspective*.

प्रमाण सिद्धान्त विरुद्धमत्र
यत् किंचिदुक्तम् मतिमान्द्य दोषात्।
मात्सर्यमुत्सार्य तदार्य चिन्ताः
प्रसादमाधाय विशोधयन्तु।।

"May the noble-minded scholars, instead of cherishing ill-will, kindly correct any errors here commited through dullness of intellect in the way of wrong statments and interpretations." Hema Candra (SR. Bs. p. 27.)

---

* Very occasionally English translation is taken as such from another author (as for instance from Dr. S. Radhakrishnan). It is then included within the inverted commas and the author is also specified at the end within brackets. The numerical data for the quotations are given at the end of the English translation; often, at the end of a consecutive series of them, if they are related textually.

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List of the Abbreviations

Ahr.	Astangahrdaya of Vagbhata
Asamg.	Astangasamgraha of Vagbhata
Bhela.	Bhela Samhita
Cakra.	Cakrapani's Commentary
Ca.su.	Canakya sutras.
Cs.	Caraka samhita
Da.	Dalhana's Commentary
Kane or PVK	History of Dharmasastras. P.V. Kane
Kau.A.	Kautilya's Arthasastra
Ma.madhu.	Madhava Madhukosa
MB.	Mahabharata
MW.	Sanskrit English Dictionary. Monier Williams.
Ra.	Rasaratna samuccaya
SR.	S. Radharkrishnan. Bs. Brhama sutra. u. upanisads.
Ys.	Patanjali Yoga sutra

N.B. Besides the above, assistance of numerous other literature has been utilised; individual references of this nature have been indicated in the Text of the Anthology. A few works of this category are : History of Indian Medicine, Girindranath Mukhopadhyaya; Vaidyakiya subhasita sahityam, B.G. Ghanekar; Ayurvediya sabdakosa, Venimadhava sastri Joshi, Narayana Hari Joshi, Maharastra Sahitya Ani Samskriti Mandal, Bombay; Bharat, as seen and known by foreigners, R.S. Babasaheb Deshpande.

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1. Ayurveda - The Science of Life

a. origin

1. धर्माथकाममोक्षाणाभारोग्यं मूलमुत्तमम्। रोगास्तस्यापहर्तारः श्रेयसो जीवितस्य च।।
प्रादुर्भूतो मनुष्याणामन्तरायो महानयम्। कः स्यात्तेषां शमोपाय इत्युक्त्वा ध्यानमास्थिताः।।

"For performing *dharma,* striving for economic prosperity, fulfilling personal desires and attaining the final liberation - (for all of these), health is the most excellent source. Diseases are the robbers of this (source) as well as the (very) splendour of living. This great impediment for mankind (in the form of the diseases) has however taken its existence now. What can be the means for pacifying them ?" - thus observing (the great sages assembled for the purpose on the slope of the Himālayas) went into contemplation (and decided to approach Indra, the lord of the gods for securing the knowledge of the Ayurveda) Cs.su.i. 15, 16.

(The origin is traced thus by Caraka as being due to the contemplation of a conference of the sages, the assistance of the gods and as a means to secure the four pursuits of life, *puruṣarthas* viz. *dharma, artha, kāma* and *mokṣa,* for all of which health is indispensable).

2. धर्मार्थं नार्थकामार्थमायुर्वेदो महर्षिभिः।
प्रकाशितो धर्मपरैरिच्छद्भिः स्थानमक्षरम्।।

It is for the sake of *dharma* and not for fulfilling personal desires and lusts that the science of Ayurveda was brought to light by the sages, who sought inviolable place (in heaven) and were solely intent on *dharma.* Caraka.

3. शरीरमाद्यं खलु धर्मसाधनम्।।

Body is the primary means of securing *dharma.* Kumarasambhava of Kālidāsa.

4. धर्मार्थकामाः सममेव सेव्या यो ह्येकसक्तः स नरो जघन्यः।।

Securing religious merit, obtaining material prosperity and fulfilling one's personal desires - should all be practised to an equal degree: he who is intent only on one of them, such a person is despicable. Mahābhārata.

b. definitions and scope

5. हिताहितं सुखं दुःखमायुस्तस्य हिताहितम्। मानं च तच्च यत्रोक्तमायुर्वेदः स उच्यते।।

A wholesome life, an unwholesome life, a happy life and an unhappy life and in addition, where what is wholesome and what is not, to these four types of life and their measures as well, are spoken about - that is called Ayurveda. Cs. su. 1. 41

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6. वत्स सुश्रुत ! इह खल्वायुर्वेद प्रयोजनं-व्याध्युपसृष्टानां व्याधिपरिमोक्षः, स्वस्थस्य रक्षणं च।।

"Dear Susruta" Dhanwantari said, "this, (you know), is the utility of Ayurveda - relieving the disease from those it has affected and protecting the healthy. This is called Ayurveda or the science of life, because life exists (i. e., is spoken about) in this discipline or one attains life by means of it. "Ss. su. 1.15

(The value of both the curative and the preventive aspects of Medicine is recognised; the development of the technical information for the measures thereof constitutes the rest of the work.)

7. तस्यांगवरमाद्यं प्रत्यक्षागमानुमानैरविरुद्धं उच्यमानमुपधारय।

"I shall tell you of its pre-eminent and the first branch, namely, surgery (and in) such a way that it is not contraty to direct observation or other traditional technical works (agama) in the field or to what we can infer by arguments of inference or analogy (*presumably based on these two data or even others*)."Ss. su. 1.16

(It is specifically stated that this discipline of Surgery is developed solely on rational grounds. No appeal is made to anything metaphysical, supernatural, magic or witchcraft. The author also makes a premise that he will not say anything contrary to the other standard technical works in the field):

8. सिद्धं सिद्धैः प्रमाणैस्तु हितं चात्र परत्र च। आगमः शास्त्रम् आप्तानां, आप्ताः तत्वार्थ वेदिनः।

A settled knowledge is (what has been concluded) with proofs and is (simultaneously) wholesome here and hereafter. Tradition is the treatise of the trustworthy. The trustworthy are the knowers of the meaning of the principles. Da. Ss. su. 1.16

(Such statements imply that the science of medicine had developed well then itself and also had many specific technical treatises, well known and actually used. Susruta's text is just one of them and mentions other contemporary works occasionally. He was chosen as but a spokesman to a group of disciples Aupadhenava, Aitarana, Aurabhra, Pauskalāvata, Karavirya and Gopuraraksita to learn Ayurveda from Dhanwantari. Four specific technical treatises are also mentioned viz., Aupadhenava, Aurabhra, Saushruta and Pauskalāvata, the other three colleagues Aitarana, Karavirya and Gopuraraksita having presumably not written any treatises of their own. Cakrapāni comments on this :)

9. संप्रति स्वशास्त्रमिथ्याज्ञाननिरासाय यानि तन्त्राणि उपास्यानि तान्याह - औपधेनवमित्यादि।

"Susruta mentions here those Texts which have to be referred in case one desires to remove any wrong or mistaken notions one would have had by reading Susruta (alone) viz., these are the four other specific corroborative texts of contemporary times. Cakra. Ss. su. 1.16

(At present no work by Puskalāvata exists but Cakrapani himself quotes from him specifically, later on. As such this work would have been presumably seen by him then. Much further details of this nature i.e., concerning ancient and now usually forgotten workers on Ayurveda can be found out in this way by future scholarship and close study of specially the commentaries.)

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10. शल्यं, शालाक्यं, कायचिकित्सा, भूतविद्या, कौमारभृत्यम्, अगदतन्त्रं, रसायनतन्त्रं, वाजीकरणतन्त्रमिति।।

The eight branches were: *śalya* (surgery), *śālākya* (treatment of the supraclavicular regions of the body viz., mostly neck and head : so named, probably because the chief surgical instrument used here is a *śālāka* or an elongated solid rod - a probe), *kāyacikitsa* (treatment of the body as a whole - mostly, internal medicine), *bhūtavidya* (demonology - actually, mental diseases), *kaumarabhṛtyam* (service of the child - paediatrics), *agadatantra* (science of the antidotes of poisons - toxicology), *rasāyana tantra* (rejuvenation) and *vājīkaraṇa* (virilification). Ss. su. 1.8, 9.

(It is not clear however if everyone of these eight branches did have a separate written Text of its own. It is likely they had. That they did form recognised and separate branches of study is clear from Ss. su. 1.9 :)

11. एवमयमायुर्वेदोऽष्टांग उपदिश्यतेः अत्र कस्मै किं वर्ण्यतामिति।।

"In such a manner, this Ayurveda of eight branches is being taught (nowadays). Amongst these, (let me know now as to) which should be taught to you." Ss. su. 1. 9

12. अष्टास्वपि चायुर्वेदतन्त्रेषु एतदेवाधिकमभिमतम्, आशुक्रिया-
करणात् यन्त्रशस्त्रक्षाराग्निप्रणि धानात् सर्वतन्त्रसामान्याच्च।
तदिदं शाश्वतं पुण्यं स्वर्ग्यं यशस्यामायुषं वृत्तिकरं चेति।

"Among all of these eight branches even, surgery is (no doubt) the best favoured, for, the action undertaken here is quick and immediate. There is an application of (such impressive and immediately effective devices like) machines, surgical instruments, caustics and fire and the (principles of) employing them is (also) common to all the branches. Therefore, it is that this science (of surgery) is eternal, meritorious and holy. It confers the boon of life to the patients and also affords a (profitable) profession to the physician". Ss. su. 1. 18, 19

13. आयुः शरीरेन्द्रियसत्वात्मसंयोगः, तदस्मिन्नायुर्वेदे विद्यते अस्तीत्यायुर्वेदः,
अथवा आयुर्विद्यते ज्ञायते अनेनेत्यायुर्वेदः, आयुर्विद्यते विचार्यते
अनेन वेत्यायुर्वेदः आयुरनेन विन्दति प्राप्नोतीति वाऽऽयुर्वेदः।।

The span of life (*āyu*) is a combination of the body, the senses, the mind and the soul. It is this (combination) that exists (i.e. is dealt with) in this Science of Life; that is why it is (called) Ayurveda. Or, this span is understood through this (discipline); that is why it is Ayurveda. Or, this span is getting known and deliberated upon through this (science), hence it is Ayurveda. Or, the span of life (its full extent and correct maintenance) is obtained or secured (by one who follows it), hence it is Ayurveda. Da.S.su. 1.15.

14. हेतुर्लिंगौपधज्ञानं स्वस्थातुरपरायणम्। त्रिसूत्रं शाश्वतं पुण्यं बुभुदे यं पितामहः।। कालबुद्धीन्द्रियार्थानां योगो मिथ्या न चाति च। द्व्याश्रयाणां व्याधीनां त्रिविधो हेतुसंग्रहः।।

वायुः पित्तं कफश्चोक्तः शारीरो दोषसंग्रहः। मानसं पुनरुद्दिष्टो रजश्च तम एव च।। किंचिद्दोषप्रशमनं किंचिद्धातुप्रदूषणम्। स्वस्थवृत्तौ मतं किंचित् त्रिविधं द्रव्यमुच्यते।।

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(Ayurveda) consists of a knowledge of the etiology (and) the symptoms (of the diseases, and) the medicines (thereof) – (all devoted to two objectives :) the healthy and the diseased, (and) three basic trends (at every step); (this science is) eternal and holy, and Lord Brahma had known of it earlier. Cs.su.1.24.

(The basic trends are three, viz., concerning with the cause, the symptom and the medicine for a disease; every one of these show further division into three aspects as follows : (i) the *basic trends of the cause*. For the diseases that have two resorts viz., the body and the mind, the entirety of the causes responsible is threefold : an equable, a false or an over dosed commingling of the factors (which again are three :) time, intellect and the sensibilities. Cs.su.1.54. (ii) *the basic trends of the symptom*. The entirety of the morbidities for the diseases of the body are designated by (the terms) *vāta, pitta* and *kapha*. Of the diseases of the mind, however, the factors for morbidity are only (two) *raja* (passion or attachment) and *tama* (delusion). Cs.su.1.57. (iii) *The basic trends of the medicine* : Medicines are also threefold. Some tranquilise the vitiation, some vitiate the constituents of the body while some others are considered the best in maintaining the state of health; in this way, medicines are said to be of three kinds. Cs.su.1.68).

15. कार्यं धातुसाम्यमिहोच्यते।
धातुसाम्यक्रिया चोक्ता तन्त्रस्यास्य प्रयोजनम्।

The prime activity spoken about here is : equilibrium of the body constituents. The process of bringing about an equlibrium of the body constituents is said to be the utility of this science (of Ayurveda). Cs.su.1.52.53.

c. *praise*

16. तस्यायुषः पुण्यतमो वेदो वेदविदां मतः।
वक्ष्यते यन्मनुष्याणां लोकयोरुभयोर्हितम्।।

It is the opinion of the knowers of the vedas that this veda or knowledge of *ayums* is to be considered as the most sacred among the *vedas*, for this speaks of what is wholesome to both the worlds, (this, and, the other, while the other *vedas* speak of what is wholesome in the other world only). Cs.su.1.43

17. इह चत्वारि दानानि प्रोक्तानि परमर्षिभिः।
विचार्य नानाशास्त्राणि शर्मणेऽत्र परत्र च।।
भीतेभ्यश्चाभयं देयं, व्याधितेभ्यस्तथौषधम्।
देया विद्यार्थिने विद्या, देयमन्नं क्षुधातुरे।।

Four gifts have been spoken of here by the great sages after deliberating upon many a *śāstra* (a technical treatise), as being responsible for bringing peace and happiness here as well as in the next world. One should give the gift of assurance and security to the frightened, appropriate medicines to the diseased, education of the sciences to students who ask for them and food to the hungry. *Kāśikhanda*

18. एकतः क्रतवः सर्वे सहस्रवरदक्षिणाः।
अन्यतो रोगभीतानां प्राणिनां प्राणरक्षणम्।

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On one pan of the balance stand all the sacrificial rites accompanied with thousand valued presents. On the other sits the protection of life of the creatures afraid of the diseases. *Mahabharata*.

19. आकाशस्य यथा नान्तः सुरैरप्यवगम्यते।
तद्वदारोग्यदानस्य नान्तो वै विद्यते क्वचित्।।

Just as the end of the sky is not understandable even by the gods, similarly there does not indeed exist any sort of limit for the (merit one secures by the) gift of health. *Skandapurāṇa*.

20. नहि जीवितदानाद्धि दानमन्यद्विशिष्यते।
तस्मादुपाचरेत् स्वेन स्वेन निस्वतपस्विनः।।

There does not exist any gift greater and more extolled than the gift of life. Therefore one should treat the moneyless and the saintly by spending one's own money. As.

21. क्वचिद्धर्मः क्वचिन्मैत्री क्वचिद्यशः क्वचिदर्थः।
कर्माभ्यासः क्वचिच्चेति चिकित्सा नास्ति निष्फला।।

Sometimes *dharma*, sometimes friendship, sometimes material wealth, sometimes fame, and sometimes a practice of the professional work – (get gained) and thus, giving medical treatment is never fruitless. As

22. सनातनत्वाद् वेदानामक्षरत्वात्तथैव च।
चिकित्सात्पुण्यतमं न किंचिदपि शुश्रुम।।

Because of its eternality and simultaneously an indestructability among the *vedas*, we have not heard of anything more sacred than the science of medical treatment. Suśruta

23. कायवाग्बुद्धिविषया ये मलाः समुपस्थिताः।
चिकित्सालक्षणाध्यात्मशास्त्रैस्तेषां विशुद्धयः।।

Whatever impurities that come up concerning the body, the speech and the intellect – a cleaning of them (takes place) by the science of medicine, the grammar and the spiritual science, respectively. Vakyapadiya

24. सद्यः फलति गांधर्वं, मासमेकं पुराणकम्।
वेदाः फलन्ति कालेषु, ज्योतिर्वैद्यौ निरन्तरम्।।

The science of music gives fruit immediately, *purāṇas* within a month, *vedas* in due time (while) the sciences of astrology and medicine do so constantly.

25. अन्यानि शास्त्राणि विनोदमात्रं प्राप्तेषु वा तेषु न तैश्च किंचित्।
चिकित्सितज्यौतिषमन्त्रवादाः पदे पदे प्रत्ययमावहन्ति।।

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Other sciences are mainly for recreation. There is nothing (to be achieved) by them, whether secured or not. But the sciences of medicine, astrology and incantations bring up the proofs of their validity at each and every step. Kalpataru

26. एकं शास्त्रं वैद्यमध्यात्मकं वा सौख्यं चैकं यत्सुखं वा तपं वा।
वन्द्यश्चैको भूपतिर्वा यतिर्वा ह्येकं कर्म श्रेयसं वा यशो वा।।

There is only one technical science, medicine or spiritual science; only one happiness, health or penance ; only one worthy of worship , king or a sage; only one action, auspicious work or one that brings fame. Haritasamhita

27. म्लेच्छा हि यवनास्तेषु सम्यक् शास्त्रमिदं स्थितम्।
ऋषिवत्तेपि पूज्यन्ते किं पुनर्वेदविद्द्विजाः।।।

The barbaric foreigners and the Ionian Greeks - among them also this science (of Medicine) stands established. They are also getting worshipped as if they are the great sages or *ṛṣis* . Then what to talk about the *brāhmins* knowing the *vedas* (who also know this science). Rasahrdaya

28. आयुः कामयमानेन धर्मार्थसुखासाधनम्। आयुर्वेदोपदेशेषु विधेयः परमादरः।

Whoever that desires life, the (sole) means for religious merit (*dharma*), economic prosperity (*artha*) and happiness (*sukha*) should evince great interest in the precepts of the science of Medicine, Ayurveda. Va.As.su. 1.2

29. आयतनं विद्यानां मूलं धर्मार्थकाममोक्षाणाम्।
श्रेयः परं किमन्यत् शरीरमजरामरं विहायैकम्।।

What is there more auspicious than this body alone , (maintained) without old age and death ? (For, it is this body alone, that is) *the* abode of (all) learning, and *the* source of religious merit, economic prosperity, sensual desires and the (final) liberation. Bhagavat Govindapāda, the preceptor of Adi Śankarācārya.

d. *as a recognised body of knowledge (for e.g. as in Caraka)*

30. अत्रोच्यते - तन्त्रमार्षं कात्स्न्र्येन यथाम्नायमुच्यमानं वाक्यशो भवत्युक्तम्। बुद्ध्या सम्यगनुप्रविश्यार्थतत्वं वाग्भिर्व्याससमासप्रतिज्ञाहेतूदाहरणोपनयनिगमनयुक्ताभिस्त्रिविधशिष्य बुद्धिगम्याभिरुच्यमानं वाक्यार्थशो भवत्युक्तम्।
तन्त्रनियतानामर्थदुर्गाणां पुनर्विभावनैरुक्तमर्थावयवशो भवत्युक्तम्।।

Here is spoken about - the science (of Ayurveda) as created by the sages, in its entirety and as we have received it by tradition (and) this gets spoken out in terms of (all) the sentences therein (of the original Text). As it is being spoken about here after fully going through intellectually into all the implications and principles of the meaning (of the original text) (and) in words that are accompanied with (i.e. made to show) (the requisite) arrangement of the codification, the summarisation, the assertions or propositions, the causes, the illustrations (as are displayable), the applications and the deductions and in such a way that all this is understandable by three types of intellects (dull, intelligent and

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the genius) - this becomes spoken about (virtually) in terms of (all) the sentences (of the original text).

This gets spoken about here (in such a way that) the aspects that are difficult of comprehension in the original Treatise is told again in a stimulating way and in terms of its (various, analysed) components (lit. limbs). Cs.su. 30.17-19

(These three quotations clearly show that what is now usually regarded as quite an ancient Ayurvedic Classic of Caraka did have some other still earlier specific Text (s) of which it attempts the necessary adumbrations as the author felt as needed for his times)

31. तत्र चेत् प्रष्टारः स्युः - चतुर्णामृक्सामयजुरथर्ववेदानं कं वेदमु -
पदिशन्त्यायुर्वेदविदः ?, किमायुः ?, कस्मादायुर्वेदः, किमर्थमायुर्वेदः ?,
शाश्वतोऽशाश्वतो वा ?, कति कानि चास्यांगनि कैश्चायमध्येतव्यः ?,
किमर्थं च ? इति। तत्र भिषजा पृष्टेनैवं चतुर्णामृक्सामयजुरथर्व -
वेदानामात्मनोऽथर्ववेदे भक्तिरादेश्या, वेदो ह्यथर्वणो दानस्वस्त्ययन -
बलिमंगलहोमनियमप्रायश्चित्तोपवासमन्त्रादिपरिग्रहाच्चिकित्से
प्राहः चिकित्सा चायुषो हितायोपदिश्यते।

In case there are any (physician) questioners (who would ask a student of this science) : (1) among the four *vedas* of *rk, sama, yajus* and *atharva* which *veda* would the knowers of Ayurveda teach ?, 2) what is Āyu (span of life), 3) why is (this science called) Ayurveda, 4) what is the purpose of ayurveda, 5) is this (an) eternal or just (a) temporary (science), 6) how many and what are its branches , 7) by whom is this to be studied and 8) what for ?

Therein asked about thus by (the questioning) physician , (the student of this science) should indicate his (*answer to question* 1:) devotion to *Atharva veda* among the four *vedas* of *rk, yajus, sama* and *atharva;* (for) *atharva veda* has spoken about (even in the ancient times *prāha*) the medical treatment as it accepts (such medication as can be secured by means of) gifts, benedictory verses, sacrifices, auspicious rites, oblations in fire, compliance to religious rules, penitences, fastings, incantations and the like. Medical treatment (wherever mentioned, even in Atharva veda) is being taught (always) in order to benefit living. Cs.su.30, 20, 21

After stating (thus, that his specific) *veda* (is *atharva*), he should then speak about what he means by *ayu* or span of life (of an individual i.e. answer to question 2) ;

32. वेदं चोपदिश्यायुर्वाच्यः तत्रायुश्चेतनानुवृत्तिर्जीवितमनुबन्धो धारि चेत्येकोऽर्थः।

After declaring about his (preferential) *veda*, he should then speak about '*āyu*' or span of living. Therein, i) span of living, ii) being accompanied with animatedness (from birth to death), iii) living, iv) an accompaniment and v) the sustaining - all of these (terms) mean the same (i.e. it is these implications that one means when one employs the term '*āyu*') Cs.su. 30. 22.

(*Āyu* or span of life is regarded as an incidental or rather a coinherent phenomenon of the combination of the body, its senses and the self - all of these three *together.* That is why it is an accompaniment and a sustainer, till a period of time, after which the combination snaps and death ensues. Ayurveda teaches how to extend this span and how to live well within this span).

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33. तदायुर्वेदयतीत्यायुर्वेदः; कथमिति चेत् ? उच्यते-स्वलक्षणतः सुखाऽसुखतो हिताहिततः प्रमाणाप्रमाणतश्च; यतश्चायुष्याण्यनायुष्याणि च द्रव्यगुण कर्माणि वेदयत्यतोऽप्यायुर्वेदः । तत्रायुष्याणि अनायुष्याणि च द्रव्यगुणकर्माणि केवलेनोपदेक्ष्यन्ते तन्त्रेण ।।

It is called Ayurveda because this makes known *ayu* or span of living. How indeed ? We shall tell (you). The (span of) life is spoken about (here) in terms of specific characteristics (i.e. as seen in) the happy and the unhappy (living), the wholesome and the unwholesome (living) - (as well as) the measures and the nonmeasures (of both of these). Because of this (science), the life-giving and the non-life giving qualities and actions of the materials are made known; that is why also, this (science) is called the science of life. Therein, the life-giving and the non-life- giving qualities and actions of the materials are exclusively spoken about in this technical treatise (later on, almost throughout). Cs.su 30. 23

(i.) *a happy life; a definition*:

34. तत्र शारीरमानसाभ्यां रोगाभ्यामनभिद्रुतस्य विशेषेण यौवनवतः समर्थ अनुगतबलवीर्ययशः पौरुषपराक्रमस्य ज्ञानविज्ञानेन्द्रियेन्द्रियार्थबलसमुदये वर्तमानस्य परमर्द्धिरुचिरविविधोपभोगस्य समृद्ध सर्वारम्भस्य यथेष्टविचारिणः सुखमायुरुच्यते।

Therein, the life of such a person is considered to be happy, who is not attacked by diseases, physical or mental; who is particularly young, capable and accompanied (in every thing he does) with strength, vigour, fame, manliness and prowess; who habitually stays in a gamut of the power of knowledge, expertise, sensitivities and sense perceptions; who has an excellence of prosperity and a variety of charming enjoyments; whose all undertakings do get amply fulfilled; and who goes to whatever place he desires.

असुखमतो विपर्ययेण।

Contrary to these is unhappines.

(ii) *a wholesome life - a definition*:)

हितैषिणः पुनर्भूतानां परस्वादुपरतस्य सत्यवादिनः शमपरस्य परीक्ष्य- कारिणोऽप्रमत्तस्य त्रिवर्गं परस्परेणानुपहतमुपसेवमानस्य पूजार्ह-संपूजकस्य ज्ञानविज्ञानोपशमशीलस्य वृद्धोपसेविनः सुनियतरागरोषे - र्ष्यामदमानवेगस्य सततं विविधप्रदानपरस्य तपोज्ञान प्रशमनित्यस्याध्यात्मविदस्तत्परस्य लोकमिमं चामुं चावेक्षमाणस्य स्मृतिमतिमतो हितमायुरुच्यते।

And, a wholesome life (spoken about here) is of such a person who desists from falling in for what belongs to others, speaks truth, is intent on tranquility and quiettitude; who always does whatever he does, after (full) scrutiny; who is never inalert; who follows the three great pursuits of life viz., doing righteous deeds, seeking material wealth, and fulfilling personal desires in such a way that they do not clash with one another; who worships the worthy; who habitually indulges in (acquisition and propagation of) knowledge, expertise and (spreading) peace; who does service to the elderly; whose urges of attachment and passion, anger, jealousy, pride and prestige are all well controlled; who is constantly intent on giving various gifts; who is incessantly engaged in penance, (activities of) knowledge and

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(establishment of) peace; who knows what is soul and is always intent on (serving) it; who sees to the interest of this and the other world; and whose mind (always) remembers (all the requisite lessons it has learnt).

अहितमतो विपर्ययेण।

Contrary to these is unwholesome. Cs. su. 30.24

(ii) (*answer to question 2*)

35. प्रमाणमायुपस्त्वर्थेन्द्रियमनोबुद्धिचेष्टादीनां विकृतिन्लक्षणैरुपलभ्यतेऽनिमित्तैः, अयमस्मात् क्षणान्मुहूर्तादिदवसात्रिपंचसप्तदशद्वादशाहात् पक्षान्मासात् षण्मासात् संवत्सराद्वा स्वभावमापत्स्यत इतिः।

If there occurs without any reason an aberrant characteristic in the sensibility, sense organs, mind, intellect, behaviour and the like, (the physician would know that) this person, because of these appearances in him) is going to die in this *kṣhaṇa, muhūrta*, day, or within 3, 5, 7, 10 or 12 days, or in this fortnight or month or this six month or this year - such a (prior determination of death) is the ascertainment of the measure of the span of life. Cs.su. 30. 25

(It is by the study of such premonitory symptoms of death or *riṣṭas* that an Ayurvedic expert was expected to ascertain the remaining span of life for his patient)

(iii) (*answer to question 3*)

36. प्रयोजनं चास्य स्वस्थस्य स्वास्थ्यरक्षणमातुरस्य विकारप्रशमनं च।।

The utility of this (science) is (securing) the protection of the health of the healthy and the alleviation of the derangement in the sick. Cs.su. 30. 17-26.

(iv) (*answer to question 6*)

37. तस्यायुर्वेदस्यांगान्यष्टौः तद्यथा-कायचिकित्सा, शालाक्यं, शल्यापहर्तृकं, विषगरवैरोधिकप्रशमनं, भूतविद्या, कौमारभृत्यकं रसायनं वाजीकरणमिति।

The branches of this science of Ayurveda are eight, such as Treatment of the body (*kaya cikitsa*- Medicine), Technique of probing with a stylus (*śālākya*-Ear, Nose and Throat treatment), Removal of the surgicals (*salyapa hartṛka*- Surgery), Counteraction and Quietening of the natural and artificial poisons (*visa gara vairodhika prasamana*), Toxicology, Skill of exorcising the spirits (*bhuta vidya*-treatment of the Mental diseases), Service of the child (*kaumara bhṛtyata*-paediatrics), Elixirisation (*rasāyana*) and virilification (*vāji karana*). Cs. su. 30. 28

(v) (*answer to question 7*)

38. स चाध्येतव्यो ब्राह्मणराजन्यवैश्यैः। तत्रानुग्रहार्थं प्राणिनां ब्राह्मणैः, आरक्षार्थं राजन्यैः, वृत्यर्थं वैश्यैः; सामान्यतो वा धर्मार्थकामपरिग्रहार्थं सर्वैः। तत्र यदध्यात्मविदां धर्मपथस्थानां धर्मप्रकाशकानां वा मातृपितृभ्रातृबन्धुगुरुजनस्य वा विकारप्रशमने प्रयत्नवान् भवति, यच्चायुर्वेदोक्तमध्यात्ममनुध्या यति वेदयत्यनुविधीयते वा, सोऽस्य परो धर्मः या पुनरीश्वराणां वसुमतां वा सकाशात् सुखोपहारनिमित्ता भवत्यर्थावाप्तिरारक्षणं च, या च स्वपरिगृहीतानां प्राणिनामातुर्यादारक्षा, सोऽस्यार्थः, यत् पुनरस्य विद्वद्ग्रहणयशः शरण्यत्वं च, या च संमानशुश्रूषा, यच्चेष्टानां विषयाणामारोग्यमाधत्त सोऽस्य कामः।

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This science (of Ayurveda) is to be studied by Brāhmins, Kṣatriyas and Vaisyas. This is (to be studied) by Brāhmins for conferring benefits (to others); for the sake of giving protection (to his people), by the Ksatriyas ; and, as a means of livelihood, by the Vaisyas, and in general, for the sake of doing righteous deeds, securing material prosperity and attaining personal desires, by all. This (service) becomes the great *dharma* or, the doing of the righteous deed for those who know what is soul or who stay in the path of *Dharma*, shed light on what is *Dharma* (thereby) and who take efforts to alleviate the diseases of persons who are their mothers, fathers, brothers, relatives and preceptors and by whoever who contemplates on what is soul as spoken about in Ayurveda or understands or prescribes this (service). And, for him who secures money and material benefit from the lordly persons and the wealthy, as a gift and offering (after a successful treatment), this (science) constitutes the means of securing and protecting (his) material property. And so also for protecting one's dependents and animals, this serves as a means of (attaining) material prosperity. And, for him, who secures fame from the approval of the learned, refuge from the needy, respect and service (from others, as a result) and procurement of whatever he desires because of his own health (that he has secured by himself practising the injunctions of Ayurveda in this regard), this serves as a means of fulfilling the personal objects of senses he desires. Cs. su. 30. 29

(*a technical argumentation* :)

39. अथ भिषगादित एव भिषजा प्रष्टव्योऽष्टविधं भवति - तन्त्रं, तन्त्रार्थान् स्थानं, स्थानार्थान् अध्यायम्, अध्यायार्थान् प्रश्नं प्रश्नार्थाश्चेतिः पृष्टेन चैतद्धक्तव्यमशेषेण वाक्यशो वाक्यार्थशोऽर्थावयवशश्चेति।

Now, a physician is to be questioned about by another physician (and) this is to be done on eight aspects (of the subject) : the concerned Technical Treatise (which he follows) and the general purports thereof; the exact place (in the text which refers to the context in question) and the general meanings thereof; the particular chapter (on which he is basing his current argument) and the meanings thereof; and, the specific question (under discussion) and the full implication thereof. If he (himself) gets questioned (along these lines), these aspects are to be answered by him completely and without any residue in terms of the textual statements (relevant) and the meanings thereof as well as the several analysable components (lits. limbs) of the meanings. Cs. su. 30.30

40. पृच्छा तन्त्राद्यथाम्नायं विधिना प्रश्न उच्यते।
प्रश्नार्थां युक्तिमांस्तस्य तन्त्रेणैवार्थनिश्चयः ।।

What is asked about by an intelligent person to get at the meaning of a question from a particular Technical Treatise in consonance with the long tradition (current in this connection) and in proper and prescribed manner, *that* (alone) is considered as a (properly posed) question (and not any other, that violates these injunctions). The determination of the meaning here is to be done only in terms of the particular Treatise concerned (- an out-of-context-meaning is incorrect). Cs. su. 30.69

(These two quotations 39, 40 clearly show that in Caraka's times there were more than one Technical treatises for students of Medicine which they were expected to study and master).

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(i) *quacks and how to deal with them*

41. सन्ति पाल्लविकोत्पाताः संक्षोभं जनयन्ति ये।
वर्तकानामिवोत्पाताः सहसैवाविभाविताः।।
तस्मात्तान् पूर्वसंजल्पे सर्वत्राष्टकमादिशेत्।
परावरपरीक्षार्थं तत्र शास्त्रविदां बलम्।।
शब्दमात्रेण तन्त्रस्य केवलस्यैकदेशिकाः।
भ्रमन्त्यल्पबलास्तन्त्रे ज्याशब्देनेव वर्तकाः।।

There do exist some sciolists (superficial pretenders to knowledge) who merely generate an agitation and a sudden jumping up like a flock of partridges, though they themeselves do not have the full comprehension or the feel of the subject. Therefore one should assail them everywhere by raising discussions along the eight aspects as noted above in order to ascertain their coverage of the subject and strength in the technicality. Persons who are familiar with only one aspect of the Treatise, get confused by the very sounds of the words therein, being feeble in their strength, just like the patridges who get frightened by the very sound of the twang of the bow. Cs.su. 30. 72-74.

42. पशुः पशूनां दौर्बल्यात् कश्चिन्मध्ये वृकायते।
स सत्यं वृकमासाद्य प्रकृतिं भजते पशुः।।
तद्वज्ज्ञोऽज्ञमध्यस्थः कश्चिन्मौखर्यसाधनः।
स्थापयत्याप्तमात्मानमाप्तं त्वासाद्य भिद्यते।।

A (cunning) beast moves about as if it is a very wolf among the other beasts because of the latter's weakness. But, when it comes across a real wolf, it reverts to its real (timid) nature. Similarly, an ignorant (physician), sitting among ignorant persons struts about and establishes his own excellence and trustworthyness. But he gets ruptured out, if he comes across a really trustworthy physician. Cs. su. 30. 75-76

43. बभ्रुर्गूढ इवोर्णाभिरबुद्धिरबहुश्रुतः।
किं वै वक्ष्यति संजल्पे कुण्डभेदी जडो यथा।।

(He is virtually) an ichneuman covered over with wool as it were, non intelligent and not well versed. What will he talk during a discussion ? He is just a pot-breaking or a clumsy dullard. Cs. su. 30. 77

44. सद्वृत्तैर्न विगृह्णीयाद्भिषगल्पश्रुतैरपि।
हन्यात् प्रश्नाष्टकेनादावितरांस्त्वाप्तमानिनः।।

One should not aggressively contend with a physician of good conduct even though he is learned little. But one should strike down at the outset itself other (such pretentious physicians) by these eight questions, who consider themselves trustworthy (though they are not)

दम्भिनो मुखरा ह्यज्ञाः प्रभूताबद्धभाषिणः।
प्रायः, प्रायेण सुमुखाः सन्तो युक्तात्पभाषिणः।।

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तत्वज्ञानप्रकाशार्थमहंकारमनाश्रिताः ।
स्वल्पाधाराज्ञमुखरान्मर्षयेन्न विवादिनः ।।

The ignorant (physicians) are usually fraudulent, garrulous and talk excessively without any reason and consistency. The gentle and the good (physicians) are gracious and talk little and whenever they talk, they talk with propriety and never take recourse to egoism so that they can know what is true knowledge as well as exhibit it out. In case the physician who argues with you is ignorant, has little basis but is (still) garrulous, do not tolerate him. Cs. su. 30. 78-80.

45. परो भूतेष्वनुक्रोशस्तत्वज्ञान (ने) परा दया।
येषां तेषामसद्वादनिग्रहे निरता मतिः ।।

The intellect of such a physician who is merciful to all and kind in giving out his knowledge is always intent on destroying untrue argumentation. Cs. su. 30.81

46. असत्पक्षाक्षणित्वार्तिदम्भपारुष्यसाधनाः ।
भवन्त्यनाप्ताः स्वे तन्त्रे प्रायः परविकत्थकाः ।।
तान् कालपाशसदृशान् वर्जयेच्छास्त्रदूषकान्।
प्रशमज्ञानविज्ञानपूर्णाः सेव्या भिषक्तमाः ।।

Those physicians who have an untrue basis (in their knowledge), boast about themselves with others and in case any occasion of argumentation with a true physician arises they pur forth momentary, specious and trifling reasons (that they do not have any time to argue just at the moment, or they have some other pressing engagement and so on) or some ailment or the other (of headache, stomach trouble, etc.) or out-right deceipt or too harsh (and unbearable) words. They are mostly untrustworthy even within their own professed technicalities.

One should avoid such currupters of this technical science (of Ayurveda) who are like the very lassoes of the God of Death. One should take recourse to and serve only those excellent physicians who are full of peace, knowledge and expertise. Cs. su. 30.82, 83

f. *the value of knowledge*

47. समग्रं दुःखमायत्तमविज्ञाने द्व्याश्रयम्। सुखं समग्रं विज्ञाने विमले च प्रतिष्ठितम्।

The entirety of unhappiness of both (the physical and the mental), stems from ignorance. The entirety of happiness lies established in clear and expert knowledge.

इदमेवमुदारार्थमज्ञानां न प्रकाशकम्। शास्त्रं दृष्टिप्रणष्टानां यथैवादित्यमण्डलम्।।

This science of such illustrious implications (however) does not enlighten the ignorant just as the very orb of sun cannot illuminate those who have lost their sight. Sc. su. 81-85.

48. यथा सुमनसां सूत्रं संग्रहार्थं विधीयते। संग्रहार्थं यथाऽर्थानामृषिणा संग्रहः कृतः ।।

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Just as a thread becomes necessary for collecting together the many flowers (in a garland), this collection (of the aphorisms) has been created by the sages in order to collect together several subjects at a single place. Cs.su. 30.90.

(This particular quotation clearly indicates that Caraka has merely attempted a codification or a compendium of much earlier knowledge as his own terms Samhita overtly implies).

g. *life span or āyu ; is it predetermined or not ? - utility or uselessness of the science of medicine*

49. दानं दयाशीलं सत्यं कृतज्ञता ब्रह्मचर्यं मैत्री रसायनानि इति पुण्यायुर्वृद्धिकराणि एतानि।

Charity, kindness, character, truth, gratitude, continence, friendliness and the elixirs (the vitaliser drugs) - these are auspicious and causative to increase the span of life. Ra. 30.113

50. इहाग्निवेश! भूतानामायुर्युक्तिमपेक्षते। दैवे पुरुषकारे च स्थितं ह्यास्य बलाबलम्।।
दैवमात्मकृतं विद्यात् कर्म यत् पौर्वदैहिकम्। स्मृतः पुरुषकारस्तु क्रियते यदिहापरम्।।

Here Agnivesa, the life span of creatures depends upon a combination of destiny as well as human effort, for its strength or weakness is based on these two. Destiny should be known as what is done by oneself in a previous birth. Human effort is regarded as what is done in this life onwards. Cs. vi. 3.29, 30.

51. बलाबलविशेषोऽस्ति तयोरपि च कर्मणोः। दृष्टं हि त्रिविधं कर्म हीनं मध्यममुत्तमम्।।

51. In these (two that constiute the) actions, there are various degrees of strength and weakness. For, it is seen that (any) action is of three kinds (from which further results will ensue henceforth) : weak, moderate and strong. Cs. vi. 3. 31

52. तयोरुदारयोर्युक्तिर्दीर्घस्य च सुखस्य च। नियतस्यायुषो हेतुर्विपरीतस्य चेतरा।।
मध्यमा मध्यमस्येष्टा कारणं शृणु चापरम्। दैवं पुरुषकारेण दुर्बलं ह्युपहन्यते।।
दैवेन चेतरत् कर्म विशिष्टेनोपहन्यते। दृष्ट्वा यदेकं मन्यन्ते नियतं मानमायुषः।।

When there is a combination of destiny as well as human effort, both of the best viz. the strong, kind-this serves for a long, happy and predetermined life span. If they are different (i.e. not strong), the span of life is also different. If moderate, the span is also considered moderate. Listen to an another reason. Thus, if destiny is weak, it admits of being overcome by effort. If destiny is otherwise (i.e. strong) it overcomes the effort. Some people observing only this latter (situation), come to the conclusion that all life is predetermined. Cs. vi.3.32. 34.

53. कर्म किंचित् क्वचित् काले विपाके नियतं महत्। किंचित्त्वकालनियतं प्रत्ययैः प्रतिबोध्यते।।

There are some powerful actions which fructify at a predetermined time. There are others however that are not predetermined in time for their fructification but (lie latent and) get woken up (only by) suitable conditions. Cs. vi. 3.35

54. तस्मादुभयदृष्टत्वादेकान्तग्रहणमसाधु। निदर्शनमपि चात्रोदाहरिष्यामः - यदि हि नियतकालप्रमाणमायुः सर्वं

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स्यात्, तदाऽऽयुष्कामाणां न मन्त्रौषधिमणिमंगलबल्युपहारहोमनियमप्रायश्चितोपवासस्वस्त्ययनप्रणिपातगमनाद्याः क्रिया इष्टयश्च प्रयोज्येरन् ; नोद्भ्रान्तचंड चपलगोगजोष्ट्रखरतुरग महिषादय : पवनादयश्च दुष्टाः परिहार्याः स्युः, न प्रपातगिरिविषमदुर्गाम्बुवेगाः, तथा न प्रमत्तोन्मत्तोदभ्रान्तचण्डचपल मोहलोभाकुलमतयः, नारयः, न प्रवृद्धोऽग्निः, न च विविधविषाश्रयाः सरीसृपोरगादयः, न साहसं, नादेशकालचर्या न नरेन्द्र प्रकोप इतिः एवमादयो हि भावा नाभावकराः स्युः। आयुपः सर्वस्य नियतकालप्रमाणत्वात्। न चानभ्यस्ताकालमरणभयनिवारकाणामकालमरणभयमागच्छेत् प्राणिनां व्यर्थाश्चारम्भकथाप्रयोगबुद्धयः स्युर्महर्षीणां रसायनाधिकारे, नापीन्द्रो नियतायुष शत्रुं वज्रेणाभिहन्यात्, नाश्विनावार्तं भेपजेनोपपादयेता, न महर्षयो यथेष्टमायुस्तपसा प्राप्नुयः, न च विदितवेदितव्या महर्षयः सम्यरेशाः सम्यक् पश्येयुरुपदिशेयुरुचरेयुर्वा। अपि च सर्वचक्षुषामेतत् परं यदैन्द्रं चक्षुः, इदं चाप्यस्माकं तेन प्रत्यक्षं यथा पुरुपसहस्त्रा णामुत्थायोत्थायाहवं कुर्वतामकुर्वतां चातुल्यायुष्ट्वं, तथा जातमात्राणामप्रतीकारात् प्रतीकाराच्च, अविषविषप्राशिनां चाप्यतुल्यायुष्ट्वमेव,न च तुल्यो योगक्षेम उदपानघटानां चित्रघटानां चोत्सीदतां तस्माद्भितोपचारमूलं जीवितम् अतो विपर्ययान्मृत्युः।

Therefore, since both (i.e. predetermined as well as unpredetermined nature) are seen, it is not right to cling to either side exclusively. Here we shall illustrate with the incidetns as well: If the life-span has been predetermined for all, then, none would have been found to seek longevity by means of such acts as incantations, drugs, (wearing) beads, auspicious rites, sacrifices, offerings, oblations, (religious) vows, penitences, fastings, benedictions, fallings down in salutation and pilgrimages or sacrificial rites. None would have bothered to avoid the roguish, fierce and capricious bulls, elephants, camels, donkeys, horses, buffaloes and the like and obnoxious winds; as also cataracts, mountains, formidable citadels and the rapid currents; as also the drunken, the insane, the vagrant, the fierce, the capricious and the men of minds agitated by infatuation and greed; or the enemies; or the raging fire; or, the reptiles and the serpents of various kinds of poisons; or adventure and rashness; or sticking to the customs according to the place and the times; or the anger of the king; and, so on.

For, these and such others would have held no threat of destruction, all life being predetermined (for them). No fear of premature death would have assailed those who had not taken measures to ward it of. The intellects of the great sages in introductory claims (of the virtues of medicine) and the actual uses in the measures of elixirisation would have been useless (then). Even the god Indra could not have killed his ememy of a predetermined life span, even the Aświni gods could not have given a useful medicine to a patient and not even the great sages would have attained a span of life as they desired, by penance; and nor can the great sages, including the Lord of gods himself, who all know all that is to be known can be said to properly perceive, teach and practise what is right. Now, among all the types of evidences, what we see with the eye is the best. This is what is directly seen on such an evidence : among the thousands of people (in a battle field) the life-span of he who again and again rushes to fight and he who does not fight at all, is not the same. Similarly, with regard to those whose disorders are rectified as soon as they manifest themselves and those whose disorders are not so treated, the length of the span of life so enjoyed is not the same; similarly, with those who take poison and those who do not, the life span is unequal. And, the assurance of safety that a water-pot subjected to wear and tear and of a more ornamental vase is not the same. Therefore, the length of life is a matter of care and husbandry; by anything contrary to it, death will ensue. Cs. Vi. 3.36

55. अतः परमग्निवेश उवाच-एवं सत्यनियतकालप्रमाणायुषां भगवन्! कथं कालमृत्युरकालमृत्युर्वा भवतीति।।

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After this Agnivesa said : if Revered Sir, the lives of men are of unpredetermined span of life, how can there be a death in *due* time or death *before* time ?

तमुवाच भगवानात्रेयः - श्रूयतामग्निवेश! यथा यानस्यायुक्तोऽक्षः प्रकृत्यैवाक्षगुणैः उपेतः स च सर्वगुणोपपन्नो वाह्यमानो यथाकालं स्वप्रमाणक्षयादेवावसानं गच्छेत्, तथाऽऽयुः शरीरोपगतं बलवत्प्रकृत्या यथावदुपचर्यमाणं स्वप्रमाण-क्षयादेवावसानं गच्छतिः स मृत्युः काले। यथा च स एवाक्षोऽतिभाराधिष्ठित-त्वाद्विषमपथादपथादक्षचक्रभंगाद्वाह्यवाहकदोषादणिमोक्षादनुपांगात् पर्यग्नाच्चान्तराऽवसानमापद्यते, तथाऽऽयुर-प्ययथाबलमारम्भादय थाग्न्यभ्य-वहरणाद्विषमाभ्यवहरणाद्विषमशरीरन्यासाद-तिमैथुनादग्नत्संश्रयादु- दीर्णविग-विनिग्रहाद्वि धार्यवेगाविधारणाद्भूदूतविषवाय्वग्न्युपतापादभिघातादाहार-प्रतीकार- विवर्जनाच्चान्तराऽवसानमापद्यते, स मृत्युरकालेः तथा ज्वरादीनप्यातङ्. कान्मिथ्योपचरितानकालमृत्यून् पश्याम इति।।

The worshipful Atreya said unto him : Listen, Agnivesa. Just as an axle so fashioned as to serve all the purposes of an axle, endowed with all the needed efficiency, and equipped with all the desirable qualities, being drawn along, will cease to function only when it is entirely worn out in the fullness of time; so does the lifeforce, abiding in the body, strong by the very nature and properly being nourished and taken care of as well, will come to an end only with complete wearing out of itself ; then is death, *in* time. However, the self-same axle, if forced to support too heavy a weight, if the road is uneven or if there is no road at all, or if the axle or the wheel breaks or by the defects of the draught animal or the driver, or if the pin falls off or if its is not oiled or if it is jerked about, it will come to an end, *before* its time. In the same way, by the undertakilng of tasks beyound one's strength; by consuming food beyond one's digestive capacity; by keeping oneself in wrongful and uneven postures ; by too much cohabitation; by resorting to the untruthful; by suppressing the urges that have erupted; by not suppressing the reprehensible urges; by the tribulations of spirits, poisons, winds and fires; by trauma, by abstaining from food and treatment when needed, the life of man comes to an end *before* its time. This is, death *out of time* (i.e. untimely). Further, we (also) see (instances of) untimely deaths occurring as a result of wrong treatment of such maladies as fever. Cs. vi. 3.37. 38.

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2. Physician - An Assessment

a. *qualities of a good physician*

1. श्रुते पर्यवदातत्वं बहुशो दृष्टकर्मता। दाक्ष्यं शौचमिति ज्ञेयं वैद्ये गुणचतुष्टयम्।।

Full knowledge as gained by studying under experts, actual and ample personal seeing of other physicians' professional work, capability and cleanliness - these are to be considered as the quartet of the good qualities in a physician. Cs.su. 9.6.

2. कारणं भिषगित्युक्तमग्रे, तस्य परीक्षा-भिषड्.नाम यो भिषज्यति, यः सूत्रार्थ-प्रयोगकुशलः, यस्य चायु सर्वथा विदितं यथावत्। स च सर्वधातुसाम्यं चिकीर्षन्नात्मानमेवादितः परीक्षेत गुणिषु गुणतः कार्याभिनिर्वृत्तिं पश्य, कच्चिदहमस्य कार्यस्याभिनिर्वर्तने समर्थो न वेति ; तत्रेमे भिषग्गुणा वैरुपपन्नो भिषग्धानुसाम्याभिनिर्वर्तने समर्थो भवति ; तद्यथा - पर्यवदातश्रुतता, परिदृष्टकर्मता, दाक्ष्यं, शौचं, जितहस्तता, उपकरणवत्ता, सवेन्द्रियोपपन्नता, प्रकृतिज्ञता, प्रतिपत्तिज्ञता चेति।।

It has been told earlier, that the cause of medical treatment is the physician; his (own) examination (now) is as follows: Physician is one who carries out a medical treatment. He who is an expert in explaining the meaning of the aphorisms (of Ayurveda) and applying them, and to whom the (remaining) span of life of the patient (he has taken up for treatment) is known in all ways and exactly as it is, -such a physician, desiring to (establish an) equilibrium of all the constituents of the body (in the patient) should examine himself first, after seeing among his own well qualified colleagues and their qualified methodology of work, whether "I am capable in successfully accomplishing this particular case before me (in the light of what my other qualified colleagues can do in similar circumstances) or not". Therein, these are the qualities of a physician by possessing which, a physician would become fit to bring about an equilibrium in the body constituents (of his patient) : expert training under the well qualified ; wide, expert and firsthand (lit. directly seen) acquaintance with similar professional work (of his other colleagues); efficiency, cleanliness, deftness of hand, possession of all the necessary paraphernalia, being endowed with all the sense organs and faculties (i.e. not being defective here anywhere), an understanding of the nature of things and an understanding of the implications and the connotations (of texts and observations). Cs. vi. 8.86

3. ब्रह्मक्षत्रियाविट्शूद्रान् रोगार्तान् परिपाल्य च। यत्पुण्यं महदाप्नोति न तत्सर्वैर्महामखैः।।
तस्माद्भोदोगापवर्गार्थं रोगार्तं समुपाचरेत्। योऽनुगृहीतमात्मानं मन्यमानो दिने दिने।।
उपसर्पेत रोगार्तास्तीर्णस्तेन भवार्णवः।

The immense religious merit that a person gets by protecting the diseased *Brāhmin, Kṣatriya, Vaiśya* and *Sūdra* - he cannot hope to secure it even by performing all possible great religious sacrifices. Therefore one should nurse a

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patient completely (even) in order to emancipate oneself from the sins of enjoying worldly pleasures. He to whom, patients resort to, day in and day out, considering themeselves favoured thereby - the ocean of this world here is already crossed by him. Skandapurāṇa.

4. धर्मार्थकाममोक्षाणामारोग्यं साधनं यतः ।
अतस्त्वारोग्यदानेन नरो भवति सर्वदः ।।

Since health is the means of securing religious merit, material prosperity, personal desires as well as final liberation, a person becomes the giver of everything thus-by giving the gift of health. Nandīpurāṇa.

5. भिषग्बुभूषुर्मतिमानतः स्वगुणसंपदि । परं प्रयत्नमातिष्ठेत् प्राणदः स्याद्यथा नृणाम् ।।

The wise man who desires to become a physician should be therefore continuously taking effort in attaining and sustaning the excellence of his own qualities (as a physician) whereby he can be *the* giver of life to people. Cs. sū. 1. 134 (*The need for a continuing education*)

6. तदेव युक्तं भैषज्यं यदारोग्याय कल्पते । स चैव भिषजां श्रेष्ठो रोगेभ्यो यः प्रमोचयेत् ।।

That *alone* is a proper medicine which becomes responsible for health. He *alone* is the excellent among the physicians who liberates (patients) from diseases. Cs. su. 1. 135.

7. सम्यक्प्रयोगं सर्वेषां सिद्धिराख्याति कर्मणाम् । सिद्धिराख्याति सर्वैश्च गुणैर्युक्तं भिषक्तमम् ।।

Among all the measures of medication, it is the (attaining of actual) success that indicates their proper application. It is this success that indicates that the physician (concerned) is the most extolled (among the physicians) and is endowed with all the qualities (required). Cs. sū. 1.136.

8. आयुर्वेदस्य विज्ञाता चिकित्सासु यथार्थविद् ।
धर्मिषृश्च दयालुश्च तेन वैद्यः प्रकीर्तितः ।।

He is extolled as a physician who is the knower of Ayurveda, who understands the measures of medication in all thier exactitude, and who is righteous and merciful. Brahmavaivarta purana.

9. सर्वत्र मैत्री करुणाऽऽतुरेषु निरामदेहेषु नृपु प्रमोदः ।
मनस्युपेक्षापकृतिं व्रजत्सु वैद्यस्य सद्वृत्तमलंकड. रोति ।।

Friendship everywhere, mercy towards the sick, delight in people who are devoid of any sickness, overlooking in mind towards persons who are about to die - these adorn the good professional conduct of a physician. Vṛddha Vagbhaṭa As. u. 50

10. अप्राप्ते वा क्रियाकाले प्राप्ते वा न कृता क्रिया ।
क्रियाहीनाऽतिरिक्ता वा साध्येष्वपि न सिद्ध्यति ।।

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If the time for medication is not yet arrived, and when the act of medication is not done when its time has arrived, or , if there is a deficiency or excessiveness of the process of medication- in all of these circumstances there will be no accomplishment of a cure even in the case of the curable diseases. Ss. sū. 35 (: a *necessary precaution*)

11. व्याधिं पुरा परीक्ष्यैवमारभेत ततः क्रियाः ।
स्वार्थविद्यायशोहानिमन्यथा ध्रुवमाप्नुयात् ।।

It is only after examining the disease beforehand, that the act of medical treatment should be commenced. Otherwise, (the physician) is sure to secure loss of self-interst, learning and fame. As. su. 2.

12. कारणं षोडशगुणं सिद्धौ पादचतुष्टयम् । विज्ञाता शासिता योक्ता प्रधानं भिषगत्र तु ।।
पक्तौ हि कारणं पक्त्वुर्यथा पात्रेन्धनानलाः । विजेतुर्विजये भूमिश्चमूः प्रहरणानि च ।।
आतुराद्यास्तथा सिद्धौ पादाः कारणसंज्ञिताः । वैद्यग्यातश्चिकित्सायां प्रधानं कारणंभिषक् ।।

The quartet of the basic factors with its sixteen qualities altogether constitutes the cause for bringing about the success in a medical treatment (undertaken). Amongst these four, however, it is the physician who is knowledgeable and well trained and who can command and employ (the attendant staff) well, is primordial.

Just as the vessels and the fuel become the means for the cook in preparing the food; the battle-ground, the army and the weapon (become the means) for securing the victory for the commander desiring to win; so do the (other three of the quartets of the basic factors viz.) the patient and the like (i.e. the medicine and the nursing staff) constitute but the means for achieving success (in the medical treatment) for the physician. (That is why) in medical treatment, the primordial factors is the physician. Cs. sū. 9.10-12

13. गन्धर्वपुरवन्नाशं यद्विकाराः सुदारुणाः । यान्ति यच्चेतरे वृद्धिमाशूपायप्रतीक्षिणः ।।
सति पादत्रये ज्ञाज्ञौ भिषजावत्र कारणम् ।

When all the three basic factors (viz. a good patient, a good medicine and a good nurse) are present (it has been seen that) while some terrible diseases disappear without a trace whatsoever like a city of pure illusion (lit. of the *gandharvas*), others demanding an imminent remedial measure flourish further; *the* reason here is a knowledgable physician (in the former case) and an ignorant physician (in the latter case) Cs sū 9. 14. 15

14. तस्माच्छास्त्रेऽर्थविज्ञाने प्रवृत्तौ कर्मदर्शने । भिषक् चतुष्टये युक्त प्राणाभिसर उच्यते ।।

That is why, a physician who is engaged in these four (activities viz) studying the technical works expertly, understanding the meanings thereof, the actual practising of all this and the personal seeing of other physicians' professional work - *he* is called a snatcher-back-of-life (as it is departing from his patient). Cs. sū. 9. 18.

15. हेतौलिंगे प्रशमने रोगाणामपुनर्भवे । ज्ञानं चतुर्विधं यस्य स राजार्हो भिषक्तमः ।।

He, whose knowledge is fourfold (embracing as it does) the etiology, the

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symptamotology, the alleviation and the non-recurrence of the diseases, such an excellent physician is fit to be honoured by the king. Cs. sū. 9.19.

16. शस्त्रं शास्त्राणि सलिलं गुणदोषप्रवृत्तये। पात्रापेक्षीण्यतः प्रज्ञां चिकित्स्यार्थं विशोधयेत्।।

Weapon, technical treatises and water depend upon the (proper) recipient to commence (showing their) merits and demerits. Therefore, (if one desires to get the best result from a treatise) so as to secure the (real success in) medical treatment, one should (first) refine one's own wisdom and discrimination. Cs. sū. 9.20

17. विद्या वितर्को विज्ञानं स्मृतिस्तत्परता क्रिया। यस्यैते षड्गुणास्तस्य न साध्यमतिवर्तते।।

Learning, ratiocination, specialized knowledge, retentivenession total devot activity-in whom these six qualities (occur), there is nothing that is beyond him for achievement. Cs. su. 9.21.

18. विद्यामतिः कर्मदृष्टिरभ्यासः सिद्धिराश्रयः। वैद्यशब्दाभिनिष्पत्तावल्पमेकैकमप्यतः।।
यस्यत्वेते गुणाः सर्वे सन्ति विद्यादयः शुभाः। स वैद्य शब्दं सदभुतमर्हन् प्राणिसुखप्रदः।।

Learning, resolve or fixed purpose, direct seeing of other professional's work, actual practice, achieved success and the patronage-every one of these even individually is adequate to consummate the apellation of the 'physician'. Therefore, he in whom all of these auspicious qualities of learning and the like reside - *he* becomes a bestower of happiness to all beings, deserving the appellation of the physician in all its reality. Cs. sū. 9.22,23

19. शास्त्रं ज्योतिः प्रकाशार्थं दर्शनं बुद्धिरात्मनः।
ताभ्यां भिषक् सुयुक्ताभ्यां चिकित्सन्नापराध्यति।।

The technical treatise (of a science) is like a light to illuminate and show up one's own intellect. A physician, well endowed with these two (viz. the technical treatise and one's own intelligence illuminated thereby) will not make any mistake in his treatment. Cs. su. 8.24.

20. चिकित्सिते त्रयः पादाः यस्माद्वैद्यव्यपाश्रयाः। तस्मात् प्रयत्नमांतिष्ठेद्भिषक् स्वगुणसंपदि।।
मैत्री कारुण्यमार्तेषु शक्ये प्रीतिरुपेक्षणम्। प्रकृतिस्थेषु भूतेषु वैद्यवृत्तिश्चतुर्विधा।।

Since the three basic factors of medical treatment have their foundation in the physician, therefore should he be vigilant and ever taking efforts in keeping up his own excellence. Friendliness, compassion towards the distressed, loving care towards the patients who have curable diseases and neglilgence in repsect of those (patients) who are sure to die - the profession of a physician is thus four fold. Cs. su. 9.25, 26.

b. *qualities of a bad physician*

21. कुर्यान्निपतितो मूर्ध्नि सशेषं वासवाशनिः। सशेषमातुरं कुर्यान्नत्वज्ञमतमौषधम्।।

It is likely that one can still have some span of life (i.e. can survive) even when a thunderbolt directly falls on one's head. But one will not have any life left

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(i.e. will surely die) if one takes a medicine from an ignorant physician. Cs.su. 1. 129.

22. दुःखिताय शयानाय श्रद्धधानाय रोगिणे। यो भेषजमविज्ञाय प्राज्ञमानी प्रयच्छति।।
त्यक्त धर्मस्य पापस्य मृत्युभूतस्य दुर्मतेः। नरो नरकपाती स्यालस्य सम्भाषाणादपि।

A person becomes liable to go to hell even if he converses with a physician who presumes himself to be highly knowledgeable but gives a medicine without knowing about it to the patients who are grief stricken, bed ridden and have full faith in him. He (i.e. such a physician) has (infact) abandoned (all) *dharma* and is a sinner, the very death himself and evil minded. Cs.su. 1. 130-131.

23. वरमाशीविषविषं क्वथितं ताम्रमेव वा। पीतमत्यग्निसंतप्ता भक्षिता वाऽप्ययोगुडाः।।
नतु श्रुतवतां वेषं बिभ्रता शरणागतान्। गृहीतमन्नं पानं वा वित्तं वा रोगपीडितान्।।

It is preferable to die by taking an immediately fatal poison or drinking a decoction of copper or by gulping an iron ball made red hot by fire than to take shelter under a quack who (merely) bears the guise of a well versed physician and takes food, drink and money from the disease-stricken who have taken shelter under him. Cs. su.1.. 132-133.

24. ते घुणाक्षरवत् कँचिदुत्तार्य्य नियतायुषम्।
घ्नन्ति वैद्याभिमानेन शतान्यनियतायुषाम्।।

By saving some patient accidentally, just as a termite bite of a palm leaf may some assume the form of a letter by sheer accident, the quack kills hundreds of other patients who would have had their lives otherwise, by his (sheer) pelf of being a physician. Vrddha vagbhata As. U. 50

25. वरमात्मा हुतोऽज्ञेन न चिकित्सा प्रवर्तिता।।
पाणिचाराद्यथाऽचक्षुरज्ञानाद्भीत भीतवत्। नौर्मारुतवशेवाज्ञो भिषक् चरति कर्मसु।।

It is better to offer onself in fire rather than commence a medical treatment under an ignorant (physician). Just as a person without eyes moves about through the help of his hands and the stick therein, falteringly and with ignorance and fear at every step, or like a boat at the mercy of the winds, so does an ignorant physician proceed in his work. Cs. su. 9.15, 16.

26. यदृच्छया समापन्नमुत्तार्य नियतायुषम् भिषड्.मानी निहन्त्याशु शतान्यनियतायुषाम्।।

(Occasionally) curing a patient who has come to his refuge by sheer accident, the ignorant physician who prides himslef as a real physician. kills hundreds of others immediately. Cs. su. 9.17

c. *kinds of physicians*

27. भिषक्छद्मचराः सन्ति सन्त्येके सिद्धसाधिताः।
सन्ति वैद्यगुणैर्युक्ताश्त्रिविधा भिषजो भुवि।।

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There are three types of physicians. Some physicians are there who are just pretenders; others who are practioners (solely) because of the patronage (lit. the shelter, they enjoy) of another successful physician, while yet others are (those that are) really endowed with *the* qualities of a physician – (thus) there are three kinds of physicians in the world. Cs. su. 11.50

28. वैद्यभाण्डौपधैः पुस्तैः पल्लवैरवलोकनैः । लभन्ते ये भिषक्शब्दमज्ञास्ते प्रतिरूपकाः ।।

They who secure the mere appellation of a physician only by their paraphernalia of the huge vessels for storing the drugs, the dummies (for practising different kinds of bandage tying), the (ample) herbal stock and their own way of looking about and posing – they are just ignorant, pretenders. Cs. su. 11.51.

29. श्रीयशोज्ञानसिद्धानां व्यपदेशादतद्विदाः । वैद्यशब्दं लभन्ते ये ज्ञेयास्ते सिद्धसाधिताः ।।

They who secure the appellation of a physician under the pretext of their working with another physician who is well accomplished in wealth, fame and knowledge – these are to be known as practitioners because of the (sheer) patronage (of other) successful (physicians), the second category. Cs. su. 11.52

30. प्रयोगज्ञानविज्ञानसिद्धिसिद्धाः सुखप्रदाः । जीवितामिसरास्ते स्युर्वैद्यत्वं तेष्ववस्थितम् ।।

Those who are accomplished because of their (own) practical application of medicine, knowledge, special understanding and the previous success – these bestow happiness. They are the snatchers back of life (as it is departing from a patient). Physicianness remains established in them. Cs. su. 11.53.

d. *details regarding the nature and duties of the work of physician*

31. द्विविधास्तु खलु भिषजो भवन्त्यग्निवेश! प्राणानामेकेऽभिसरा हन्तारो रोगाणां, रोगाणामेकेऽभिसरा हन्तारः प्राणानामिति ।।

There exist two kinds of physicians Agnivesa : those who go after snatching back life (as it is about to depart from the patient) and destroying diseases, and, the others who secure back the disease and destroy the life. To the revered Atreya who was speaking thus, Agnivesa enquired "how can these become recognisable by us". Ca. su. 29.5.

32. य इमे कुलीनाः पर्यवदातश्रुताः परिदृष्टकर्माणो दक्षाः शुचयो जितहस्ता जितात्मानः सर्वोपकरणवन्तः सर्वेन्द्रियोपपन्नाः प्रकृतिज्ञाः प्रतिपत्तिज्ञाश्च ते ज्ञेयाः प्राणानामभिसरा हन्तारो रोगाणाम् ।

(*Atreya replies* :)

"It is these physicians (that I see around me) who are born in a good family; have learnt their lessons expertly under good teachers; have themselves seen much professional work (as being done by other physicians); who are capable, clean, deft of hands and self-controlled; who possess all the necessary paraphernalia for their work and have all their sensory abilities intact; who know the (true) nature of things as well as what to do when obstructions come. – these are to be known as the snatchers-back-of life and the destroyers of diseases."

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तथाविद्या हि केवले शरीरज्ञाने शरीराभिनिर्वृत्तिज्ञाने प्रकृतिविकारज्ञाने च निःसंशयाः, सुखसाध्यकृच्छ्रसाध्ययाप्यप्रत्याख्येयानां च रोगाणां समुत्थानपूर्वरूपलिंग वेदनोपशय विशेषज्ञाने व्यपगतसंदेहाः, त्रिविधस्यायुर्वेदसूत्रस्य ससंग्रहव्याकरणस्य सत्रिविधौषधग्रामस्य प्रवक्तारः, पंचत्रिंशतो मूलफलानां चतुर्णां च स्नेहानां पंचाना च लवणानामष्टानां च मूत्राणामष्टानां च क्षीराणां क्षीरत्वग्वृक्षाणां च षण्णां शिरोविरेचनादेश्च पंचकर्माश्रयस्यौषधगणस्याष्टविंशतेश्च यवागूनां द्वात्रिंशतश्चूर्ण प्रदेहानां षण्णां च विरेचनशतानां पंचानां च कषायशतानां प्रयोक्तारः, स्वस्थवृत्तविहितभोजनपाननियमस्थान चङ्क्रमण शयनासनमात्राद्रव्यांजन धूमनावनाभ्यंजनपरिमार्जनवेगा-विधारणव्यायामसात्म्येन्द्रियपरीक्षोपक्रमणसद्वृत्त कुशलाः, चतुष्पादोपगृहीते च भेषजे षोडशकले सविनिश्चये सत्रिपर्येषणे सवातकलाकलज्ञाने व्यपगतसंदेहाः, कुशलाश्च स्मृतिमतिशास्त्रयुक्तिज्ञानस्यात्मनः शीलगुणैरविसंवादनेन च संपादनेन सर्वप्राणिषु चेतसो मैत्रस्य मातापितृबन्धुवत् एवं उक्ता भवत्यग्निवेश ! प्राणानामभिसरा हन्तारो रोगाणामिति।।

Phyiscians of this kind indeed do not have any doubt (whatsoever) as regards the knowledge of the body alone (its structure and function) or the knowledge of the coming about or the development of the body or the knowledge of the disorders of the normal nature. All their doubts have been cleared as pertaining to the specialities of uprisal, symptomatic manifestations, pains and homologations for the diseases that are easily cured, cured with difficulty, merely mitigatable or uncurable. They can speak authoritatively on the three theoretical tenets of Ayurvada (viz. the cause *hetu*, the symptom *linga* and the medicine *ausadha*, for a disease) in brief as well as with all the (requisite) analytical elaborations along with the three categories of drugs (plant, animal and mineral). They do employ (during practice) the thirtyfive root and fruit drugs, the four oleatives, the five (medicative) salts, the eight (types of) wines, the eight (types of) milks, the six types of milky trees whose bark as well as latex are useful,the whole group of the drugs utilised in *panca karma* such as errhination and the like, the twenty-eight (types of) rice gruels or the *yavāgūs*, thirty-two types of powders and ointments, the six hundered (types of) purgatives and the five hundred decoctives. They are skilful as regards the measures prescribed for habitual health and as concerning the rules thereof for food, drink, posture, after-dinner walk, sleeping and sitting as well as the materials (utilised) for collyrium, fumigation, errhination, anointed bath, massaging, non-suppression and suppression of the natural urges, physical exercises, campatibilities and homologations, examination and treatment of sense faculties and good conduct in life. They have their doubts completely removed as regards determining the medicines of the sixteen qualities that are fit to be utilised in the medications of the four basic factors, in the three human pursuits and the knowledge of the *vātakalākala (the particles of vayu as distributed in the body* MW).

They are experts in treating all persons after securing a (feeling of) friendliness in their mind as if these (latter) are (now, the physician' own) mothers, fathers, brothers or relatives. They can do so because their own conduct and qualities do not show any discordance (whatever) for the strangers and the retentiveness, the resoluteness and the technical knowledge (they bring forth for the work). Physicians thus endowed Agnivesa are what are called the snatchers-back-of-life and the destroyers-of-the-disease. Cs. su. 29.7.

e. *how to deal with quacks.*

33. अतो विपरीता रोगाणामभिसरा हन्तारः प्राणानां, भिषक् छद्मप्रतिच्छन्नाः
कण्टकभूता लोकस्य प्रतिरूपकसधर्माणो राज्ञां प्रमादाच्चरन्ति राष्ट्राणि।।

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Those who are contrary to these (qualifications) are the snatchers-back-of diseases and the destroyers-of-life. They are the very thorns of the world, disguised in the form of physicians but concealing their own real nature. They move about in the realm of the countries as alter-images of physicians solely because of the faults and negligence of the king. Cs. su. 29.8

34. तेषामिदं विशेषविज्ञानं भवति-अत्यर्थं वैद्यवेशेन श्लाघमाना विशिखान्तरमनुचरन्ति कर्मलोभात्, श्रुत्वा च कस्यचिदातुर्यमभितः परिपतन्ति, संश्रवणे चास्यात्मनो वैद्यगुणानुच्चैर्वदन्ति, यश्चास्य वैद्यः प्रतिकर्म करोति तस्य च दोषान्मुहुर्मुहुः उदाहरन्ति, आतुरमित्राणि च प्रहर्षणोपजापोपसेवादिभिरिच्छन्त्यात्मीकर्तुं स्वल्पेच्छुतां चात्मनः ख्यापयन्ति, कर्म चासाद्य मुहुर्मुहुरवलोकयन्ति दाक्ष्येणाज्ञानम् आत्मनः प्रच्छादयितुकामाः, व्याधिं चापावर्तयितुमशक्नुवन्तो व्याधितमेवानुपकरणमपरिचारकमनात्मवन्तमुपदिशन्ति अन्तगतं चैनमभिसमीक्ष्यान्यमा श्रयन्ति देशमपदेशमात्मनः कृत्वा, प्राकृतजनसन्निपाते चात्मनः कौशलमकुशलवत् वर्णयन्ति, अधीरवच्च धैर्यमपवदन्ति धीराणां, विद्वज्जनसन्निपातं (चाभिसमीक्ष्य) प्रतिभयमिव कान्तारमध्वगाः परिहरन्ति दूरात्, यश्चैषां कश्चित् सूत्रावयवो भवत्युपयुक्तस्तमप्रकृते प्रकृतान्तरे वा सततमुदाहरन्ति, न चानुयोगं इच्छन्त्यनुयोक्तुं वा, मृत्योरिव चानुयोगादुद्विजन्ते न चैषामाचार्यः शिष्यः सब्रह्मचारी वैवादिको वा कश्चित् प्रज्ञायत इति।।

These (following) happen to be the special means of ascertaining them. Praising themselves and dressed overbearingly as a physician, they frequent the houses and the whereabouts of the patients, (spurned) by the sheer greed of (securing a) practice. Having heard that somebody is ill, they fall upon him from every quarters. They loudly proclaim of their own qualities as physicians in the vicinity of the patients and their friends so that the latter can hear. Again and again they point out the defects of any other physician who practices contrary to themselves. They desire to make the friends of the patient as their own by delighting them, praising them or serving them in various other ways - all the while reminding them (i.e. these friends) of their own smallness of the desire (i.e. how easily they can be satisfied). Once they get a practice, they again and again look about as if they are very competent and all the while desiring to hide their ignorance but being incapable of turning back the disease, they point out that this is so, because the patient does not have the necessary appurtances or the nursing attendants, or is not self restrained. Once they realise that the patient is nearing his end, they go elsewhere to some other patient giving out some specious reason or the other (for this abandonment). In the company of the ignorant they extol their own skilfulness as if they are (actually) inept (in doing so). They blame the courage of the brave as if this is really due to the latter's timidity. Whenever there is an occasion of the coming together of the learned, they shun it even from a distance just as a wayfarer would shun the path to a jungle by sheer fright even from a distance. If in case any portion of textual aphorism becomes useful to them they conistently point it out even if there is no occasion to do so or in an entirely different context. They do not desire that anybody should question them, neither do they question anybody. They get upset and agitated if any occasion arises for discussion as if they are facing (the very) death. One does not know as to who is their teacher, or disciple or co-student or with whom they had been disputants or understanders (of the subject). Cs. su. 29.9

35. भिषक्छद्म प्रविश्यैवं व्याधितांस्तर्कयन्ति ये। वीतंसमिव संश्रित्य वने शाकुन्तिकाद्विजान्।।
श्रुतदृष्टक्रियाकालमात्राज्ञानबहिष्कृताः। वर्जनीया हि ते मृत्योश्चरन्त्यनुचरा भुवि।।
वृत्तिहेतोर्भिषङ्मानपूर्णान् मूर्खविशारदान्। वर्जयेदातुरो विद्वान् सर्पास्ते पीतमारुताः।।

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Thus entering into the confidence of the patients by their disguise as a physician they actually harm the diseased, just as a hunter does harm the birds by spreading out his net (in such a way that it is not seen). They are (actually) kept out of (i.e. are ignorant) the knowledge of learning, first-hand training, time of action or the dosage of the medicine. They are to be abandoned, as they are infact the attendants of death in this world. A wise patient should give them up who are full of the prestige of a physician merely as a professional but are in fact expert fools; for they are like serpents who have drunk the (very) winds (and have thus become highly powerful). Cs. su. 29.10.12.

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3. Education and Learning - The Science and The Art

1. अनन्तपारं किल शब्दशास्त्रं स्वल्पं तथाऽऽयुर्बहवश्च विघ्नाः ।
सारं ततो ग्राह्यमपास्य फल्गु हंसैर्यथा क्षीरमिवांबुमध्यात् ।।

Limitless indeed is the treatise of the words, but the life (available to learn this) is very little and many are the impediments (in devoting ourselves to study). Therefore one should grasp only the essence, leaving out the unsubstantial, just as the swan separates the milk from water. Pancatantra

2. श्रद्दधानः शुभां विद्यामाददीतावरादपि । अन्त्यादपि परं धर्मं स्त्रीरत्नं दुष्कुलादपि ।।
विषादप्यमृतं ग्राह्यं बालादपि सुभाषितम् । अमित्रादपि सद्वृत्तममेध्यादपि कांचनम् ।।
स्त्रियो रत्नान्यथो विद्या धर्मः शौचं सुभाषितम् । विविधानि च शिल्पानि समादेयानि सर्वतः ।।

A person with faith should take up good sciences even from (those who are considered) inferior (in caste etc.), the great *dharma* even from the lowliest (in caste, etc.) and a gem of a lady even from a bad family. Nectar is to be taken up even (if it is) from a poison, good words even from a boy, truthful conduct even from the unfriendly and gold even from a despicable (source). Ladies, gems and sciences, *dharma*, cleanliness, good words and the various crafts are to be taken up from every (possible) quarter. Manu.

a. *formal education in ancient India (i) scope*

3. सांख्यं योगो लोकायतं चेत्यान्वीक्षिकी । धर्माधर्मौ त्रय्यामर्थानर्थौ वार्त्तायां नयापनयौ दण्डनीत्यां बलाबले चैतासां हेतुभिरन्वीक्षमाणा लोकस्योपकरोति व्यसनेऽभ्युदये च बुद्धिमवस्थापयति प्रज्ञावाक्यक्रियावैशारद्यं च करोति ।।
प्रदीपः सर्वविद्यानामुपायः सर्वकर्मणाम् ।
आश्रयः सर्वधर्माणां शश्वदान्वीक्षिकी मता ।।

Sāmkhya, Yoga, Lokāyata (the system of materialism as taught by Carvaka, M.W.) these (together) constitute *Anvīkṣikī*, the science of logical understanding. Investigating, by means of reasoning, what is (spiritual) good and evil in the vedic lore (literally, the three vedic texts of *ṛg, yajus* and *sāma vedas*), material gain and loss in (the science of) economics, good policy and bad policy in the science of politics as well as the relative strength and weakness of these three Branches of knowledge (themselves), this science of Logical Understanding (of the phenomena that the world presents) confers benefit on the people, keeps their mind steady in adversity as well as prosperity and brings about a proficiency and an expertise in (their) thought, speech and action.

The Science of Logical understanding or Rationalism is ever considered (therefore) to be the very lamp of all the fields of Formal Learning, the very means of accomplishing all activities and the support of all laws and duties (that the statecraft lays down). Kau. A. 1.2, 11, 12.

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(ii) *effect*

4. तस्माद्दण्डमूलास्तिस्त्रो विद्याः । विनयमूलो दण्डः प्राणभृतां योगक्षेमावहः ।
कृतकः स्वाभाविकश्च विनयः । क्रिया हि द्रव्यं विनयति नाद्रव्यम् ।
शुश्रूषाश्रवणग्रहणधारणविज्ञानोहापोहतत्वाभिनिविष्टबुद्धिं विद्या विनयति नेतरम् ।
विद्यानां तु यथास्वमाचार्यप्रामाण्याद्विनयो नियमश्च ।

The three Branches of learning (mentioned above) have their root in (a just administration of) the Rod i.e. the statutary rules of the State. (Administration of) this Rod (by the State), (when) rooted in (viz, assisted by) self-discipline (as well, on the part of the student), brings security and well being to living beings. (But, this) discipline is (two fold) : acquired and inborn. The training (given to the student however) disciplines (only the) suitable stuff, not the unsuited. A science imparts discipline to one, whose intellect has (the qualities of) a desire to learn, a (habit of) listening (to the teacher), learning (as such), retentivity, thorough understanding, reflectiveness, rejection (of false views) and an intentness on truth (alone and not to any other person or aspect whatsoever).

(Both) the training and the discipline in the sciences (are acquired) by (first accepting) the authoritativeness of the teachers in the respective sciences. Kau. A. 1.5.1.6

(iii) *mode of securing this effect: control over the senses*

5. विद्याविनयहेतुरिन्द्रियजयः कामक्रोधलोभमानमदहर्षत्यागात्कार्यः । कर्णत्वगाक्षिजिह्वाघ्राणेन्द्रियाणां शब्दस्पर्शरूपरसगन्धेष्वविप्रवृत्तिरिन्द्रियजयः शास्त्रानुष्ठानं वा । कृत्स्नं हि शास्त्रमिदमिन्द्रियजयः ।

Control over the senses which is elevated (initially) by training in the sciences, should be (further) secured by giving up lust, greed, pride, arrogance and foolhardiness. Absence of improper indulgence in (the pleasures of) sound, touch, colour, taste and smell by the sense of hearing, touch and sight, the tongue and the sense of smell, means (by itself, a gaining of) control over the senses. Or, the practice of (this) science (gives such a control). The entirety of acquiring this science means (by itself, a gaining of) control over the senses. Kau. A. 1.6 1-3.

b. *the art of writing*

6. प्रमाणं हि विस्तरस्य न विद्यते । न च अल्पं, अतिसंक्षेपः सामर्थ्याय उपकल्पते ।।
अल्पबुद्धेरयं तस्मान्नातिसंक्षेपविस्तरः । मंदानां व्यवहाराय, बुधानां बुद्धिविवृद्धये ।।

There is no end for elaborateness (in writing). (Therefore, in the method as adopted here) (the writing) is neither little nor too very brief. It is adequate for (learning) the efficiency (required). This is thus also enough for the dull witted to carry out their business as it is neither too brief nor too elaborate. (For the same reason), this is adequate to stimulate and improve the intellect of the learned.

(i) *criteria of excellence*

7. अर्थक्रमः संबन्धः परिपूर्णता माधुर्यमौदार्यं स्पष्टत्वमिति लेखसंपत् ।
तत्र यथावदनुपूर्वक्रिया प्रधानस्यार्थस्य पूर्वमभिनिवेश इत्यर्थक्रमः ।
प्रस्तुतस्यअर्थस्यानुपरोधादुत्तरस्य विधानमासमाप्तेरिति संबन्धः ।
अर्थपदाक्षराणामन्यूनातिरिक्ततताहेतूदाहरणदृष्टान्तैरर्थोपवर्णनाश्रान्तपदतेति परिपूर्णता ।

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सुखोपनीतवार्वर्थशब्दाभिधानं माधुर्यम्। अग्राम्यशब्दाभिधानमौदार्यम्।
प्रतीतशब्दप्रयोगः स्पष्टत्वमिति।

Arrangement of subject matter, maintenance of (proper) connections, completeness in all respects, sweetness in nature, exaltedness and lucidity constitute the excellence in writing. Among them, (stating) in consonance as it happens, placement of the principle meaning in the very beginning (itself). -this is (proper) arrangement of the subject matter in hand; to do so right upto the end - this, is (keeping up) connection. Absence of deficiency or excess of matter (in question) by means of (all the necessary) reasons, citations and illustrations (as well as) by means of words that are not belaboured (but, flowing free and natural) - this, is completeness in all respects. The use of words with a charming, meaning (that are also) easily conveyed - this, is sweetness. The use of words that are not vulgar, is exaltedness. The employment of words that are well-known is lucidity. Kau. A. 2. 10. 6-12.

(ii) *scope*

8. निन्दा प्रशंसा पृच्छा च तथाख्यानमथार्थना।
प्रत्याख्यानमुपालम्भः प्रतिषेधोऽथ चोदना।।
सान्त्वमभ्युपपत्तिश्च भर्त्सनानुनयौ तथा।
एतेष्वर्थाः प्रवर्तन्ते त्रयोदशस्तु लेखजाः।।

Censure, praise, query, statement, request, refusal, reproof, prohibition, injunction, appeasement, (asking for) help, threatening and propitiation - with these thirteen matters, the occasion for writing is concerned. Kau. A. 2. 10 23. 24.

(iii) *defects*

9. अकान्तिर्व्याघातः पुनरुक्तमपशब्दः संप्लव इति लेखदोषाः। तत्र कान्तपत्रकमचारुविषमविरागाक्षरत्वम् अकान्तिः। पूर्वेण पश्चिमस्यानुपपत्तिर्व्याघातः। उक्तस्याविशेषेण द्वितीयमुच्चारणं पुनरुक्तम्। लिंगवचनकालकारकाणामन्यथाप्रयोगोऽपशब्दः। अवर्गे वर्गकरणं वर्गे चावर्गक्रिया गुणविपर्यासः संप्लवः। इति।

Absence of charm, (presence of) contradiction, repetition, incorrect (use of a) word, and confusion - these are the defects of writing. Among them, (the use of a) black leaf (to write upon, instead of a white one, for instance), (and) writing unattractive, uneven and faint letters constitute the absence of charm. The incompatibility of the latter with the earlier is contradiction. Statement of what is (already) said, for a second time without any distinction is repetition. The wrong use of gender, number, tense and case is incorrect (use of a) word. The making of a group where there should be no group and not making a group where there ought to be a group, this reversal of qualities is confusion. Kau. A. 2. 10. 57-62.

(ii) *technical writing*

(Every technical treatise is expected to have four explicitly stated indispensable elements, *anubandhas* : the subject to be treated of, *visaya*; the purpose or object, *prayojana*; the relation, *sambandha* of the technical text, *śāstra* to the objective under study and the person entitled or competent *adhikāri* to study and utilise the treatise, or the audience, as modern parlance would have it.

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Purvamimamsa is a vast discipline of rigorous logical analysis developed for *vedic* interpretation, but very relevant to logic as such. This is the most extensive of the six *darsanas*-the traditional treatises of technical scientific thinkings of India which run in pairs *Nyaya Vaiseṣika, Samkhya-Yoga* and *Purva mimamsa- Uttara mimamsa.* For Āyurveda *Samkhya* is believed to be the philosophical basis, though *yoga* specially in its aspects of mental activities is also much relevant - after P.V. Kane.

Indian technical treatises are of several kinds whose characteristics are also clearly stated in the scholastic world, such as commentary, gloss, etc. as shown below.)

10. सर्वस्यैव हि शास्त्रस्य कर्मणो वापि कस्यचित्। यावत्प्रयोजनं नोक्तं तावत्केन गृह्यते।।

As long as the purpose of any *śāstra* (Technical Text) or of any undertaking (or act) whatever, is not declared, so long no one will take it (i.e. study or do it). Ślokavārtika, pratignā sūtra, 12.

11. विषयो विशयश्चैव पूर्वपक्षस्तथोत्तरम्। निर्णयश्चेति पंचांगं शास्त्रेऽधिकरणम् स्मृतम्।।

An *adhikaraṇa* (a chapter in a technical work) is described as having five constituents, viz. (statements of the author concerning the) 1) topic for discussion, 2) the doubt about it, 3) the prima facie view, 4) the refutation of the prima facie view and 5) the final conclusion (as the author arrives at in the light of these four).

12. सूत्रार्थो वर्ण्यते यत्र वाक्यैः सूत्रानुसारिभिः। स्वपदानि च वर्ण्यन्ते भाष्यं भाष्यविदो विदुः।।

Bhāśya , commentary, is that which sets out the meaning of the *sūtra* in sentences that follow the words of the *sūtra* and that makes its own contribution (to the elucidation of the subject of the sutra). (Kane) Bhāmati on Brahmasūtra.

Critical gloss or annotation

13. उक्तानुक्त द्विरुक्तादि चिन्ता यत्र प्रवर्तते। तं ग्रन्थं वार्तिकं प्राहुः वार्तिकज्ञा मनीषिणः।।

Vartika is one that considers what is stated in the sutra or what is omitted or what is not well stated. (Kane).

redaction (pratisamskarana)

14. विस्तारयति लेशोक्तं संक्षिपत्यति विस्तरम्। संस्कर्ता कुरुते तन्त्रं पुराणं च पुनर्नवम्।।

A redactor (of an old technical treatise) expands what has been told in brief in the original, condenses what is too elaborate and (in this manner), renders fresh again what is old. Drdhabala.

15. सूत्र-सूचनात्सूत्रणाच्चैव संन्धानादर्थ सन्ततेः। सूत्रं तु सूचनाकारिग्रन्थे तन्तु व्यवस्थयोः।।

Sūtra (etymologically, a thread over which many separate entities are strung together; MW : a sketch, a plan; that which like a thread runs through or holds together everything) aphoristic rule. It is because that it suggests (a number of

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new points) and also strings together (a variety of desparate entities) and connects up a whole lineage of meanings that Sutra is called a *sutra* . Sutra is the means of plentiful suggestions and in a book, it is like the warp and the woof, in arranging the latter's elements systematically.

16. अल्पाक्षरमसन्दिग्धं सारवत् विश्वतो मुखम्। अस्तोभमनवद्यं च सूत्रं सूत्रविदो विदुः ।।

Those who are the knowers of the *sutra* form of writing would consider that type of writing as a *sūtra* , whose words are few and unambiguous but convey the essence of the matter fully and also have an all round applicability (literally, facing all directions). (In their format) they are uninterrupted (anywhere) in continuity (literally, not containing an interjection *stubha* as in a *sāman* hymn) and wholly praiseworthy. Suśruta

17. अल्पार्थकत्वें सति बहुवर्थबोधकत्वं सूत्रत्वम्।

Sūtra-ness is to imply many a meaning though it literally has just a small amount of meaning. Cakrapāṇi

("In the anxiety for economy of words which is carried to an excess the *sūtras* are not intelligible without a commentary. They are packed with meaning which is inexhaustible. They are like shorthand notes of the teachings of the precepts to the people.

The sūtra style which aims at clarity and conciseness is adopted in all the philosophical systems as also in works on other subjects like domestic ceremonies, grammar and metres. It tries to aviod unnecessary repetitions ") SR.Bs. 23

18. बहुवर्थ सूचनात्।

'A *sūtra* is so called because it suggests wide meaning.' Bhāmāti I.I.I. (SR.Bs)

19. लघूनि सूचितार्थानि स्वल्पाक्षरपदानि च। सर्वतः सारभूतानि सूत्राणि आहुर्मनीषिणः ।।

It should be concise, indicative of its purport, (composed) of a few letters and words in every way meanigful. Such are what the wise ones called *sutras* or aphorisms.

20. उपक्रमोपसंहारौ अभ्यासो अपूर्वता फलम् । अर्थवादोपपत्ति च अंगं तात्पर्य निर्णये।।

("In determining the purport of a *sutra* the commentators adopt the principles formulated in the well known verse":)

"That the beginning, the end, the repetition, the novelty, the objective, the clarifications and the arguement - as the canons for determining its purport". Madhva's quotation in his commentary on I.1.4 as from *Bṛhatsamhita* (PVK)

(Apart from the above there are two more types of technical writings in Sanskrit, *Ṭika* and *Karika* . *Ṭika* is a commentary especialy on another commentary for e.g. Anandagiri's *ṭika* on Samkara's *bhashya* . *Kārika* is a concise statement in verse, specially of philosophy of grammar. M.W.)

(i) *the value of aphorisms and brevity in style*

21. प्रचरणमिव भिक्षुकस्य बीजतमिव कर्षकस्थ सूत्रं बुद्धिमतामल्पमप्यनल्पज्ञानाय भवति ;

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तस्माद् बुद्धिमता मूहापोह वितर्का, मन्द बुद्धेस्तु यथोक्तानुगमनमेव श्रेयः। यथोक्तं हि मार्गमनुगच्छन् भिषक् संसाधयति कार्यमनति महत्वाद्व विनिपातयत्यनतिह्रस्वत्वादुदाहरणस्येति .

Like the alms collected by the mendicant and the seeds in the hands of a sower, the aphorism though small in itself is adequate to yield a knowledge that is unlimited. It is thus (a guide) for the intelligent (physician) to use his imagination and logic, but for the dullard, it is good to faithfully follow the method laid down (in the aphorism itself). Following the prescribed way, a physician accomplishes his task; if the illustration be too elaborate or too succinct he will fail in his task. Cs. vi. 8.49.

22. सूत्रार्थो वर्ण्यते यत्र पदैः सूत्रानुसारिभिः। स्वपदानि च वर्ण्यन्ते भाष्यं भाष्यविदो विदुः।।

Where the meaning of the aphorism is described by means of words that closely follow the aphorism and (where) the (present) author's own words are also described, that is known by the knowers of Exposition as Exposition or Technical Commentary.

23. अधिकरणवशाद्धीर्घाद्गुण दोष प्राप्तितोऽर्थसम्बन्धात्। स्तुत्यर्थ संशयतः शिष्यधियां च अभिवृद्ध्यर्थं।। अल्पतोऽन्तरितत्वाद्विशेषणेष्वपि च तन्त्र वृद्धिस्तु। यत्तन्त्रे स्यात् पुनरुक्तं नेष्यते तद्विभाव्य विवरणम्।।

(*Where reptition is not a repetition* :) (Where a repetition is done) because of contextual circumstances; length (of the previous writing) so as to secure the merits and demerits; because of connectedness of the meaning; or, for the sake of praising ; or because of doubt ; or to promote the intelligence of the student ; or, because of the smallness of the interval (with the previous writing), specially so in promoting technicality ; or (where it is done) since it is (already) so in the technical text concerned -- under these circumstances, it is not to be considered as repetition, it is to be regarded (on the controry), as (but the requisite) elaboration-krapari.

(vi). *professional works*

24. अथाग्निवेशप्रमुखान् विविशुर्ज्ञानदेवताः। बुद्धिः सिद्धिः स्मृतिर्मेधा धृतिः कीर्तिः क्षमा दया।।
तानि चानुमतान्येषां तन्त्राणि परमर्षिभिः। भवाय भूतसंधानां प्रतिष्ठां भुवि लेभिरे।।

And then, the goddesses of learning, namely, Intellect, Achievement, Recollection, Brilliance, Fortitude, Fame, Forbearance and Compassion, entered into Agnivesa and the others (with him as the leader). Their treatises (written with the grace of these eight goddesses or factors, if we would like to put it so) thus became approved by the great sages and famous in this world to confer benefit for all living beings. Cs. su. 1. 39. 40

25. एकास्मिन् अति यस्येह शास्त्रे लब्धास्पदा मतिः। स शास्त्रमन्यदपि आशु युक्तिज्ञत्वात् प्रबुध्यते।।

He who is well versed in any one of the technical treatises can quickly wake up to (the nuances and specialities of) any other technical works as well, because of his knowledge of the measures of expediency needed for the purpose. Cs. si. 12.47.

26. दुर्गृहीतं क्षिणोत्येव शास्त्रं शस्त्रमिवाबुधम्। सुगृहीतं तदेवज्ञं शास्त्रं शस्त्रं च रक्षति।।

A weapon and similarly a technical treatise held by an ignorant person will harm himself. The same weapon or the technical treatise held by a knowledgeable person will on the contrary protect him. Cs. si 12. 49.

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c. *reading*

27. गीती शीघ्री शिरःकंपी तथा लिखितपाठकः । अनर्थज्ञो अल्पकण्ठश्च षडेते पाठकाधमाः ।।

One who reads in a sing-song way, too rapidly, with a shaking (lit. trembling) of the head, and just letter by letter as written (and not making up their wholistic form), not understanding the meaning (of what one reads), with too feeble a voice – these six are the vilest of the readers. Paniniya siksa Verse 12.

d. *teaching*

28. संस्कृतैः प्राकृतैर्वाक्यैः शिष्यमनुरूपतः । देशभाषाद्युपायैश्च बोधयेत् स गुरुः स्मृतः ।।

One should teach with the sentences either in Sanskrit or Prakrit and in accordance with the student concerned and by the devices of utilising the regional languages (even). He who can do so – *he* is considered a (real) teacher. Quoted from Visnudharma by Viramitrodaya.

29. यो हि गुरुभ्यः सम्यगादाय विद्यां न प्रयच्छति अन्तेवासिभ्यः स खलु ऋणी, गुरुजनस्य महदेनो भवति।

One who secures learning well from his teachers, but himself (in turn) does not teach it to (his) students, he is really a debtor and a commiter of sins against his own preceptors. Cakrapani

e. *investigation; fourfold method*:

30. द्विविधमेव खलु सर्वं सत्तासत् चः तस्य चतुर्विधा परीक्षा-आप्तोपदेशः, प्रत्यक्षमनुमानं, युक्तिश्चेति।

Everything (in this world) is of two categories only: true or false; to (ascertain) this, there is a fourfold (course of) examination – teachings of the trustworthy, direct observation, inference and strategem.

31. रजस्तमोभ्यां निर्मुक्ताः तपोज्ञानबलेन ये, येषां त्रिकाल्ममलं ज्ञानमव्याहतं सदा।
आप्ताःशिष्टा विबुद्धास्ते, तेषां वाक्यमसंशयं सत्यं, वक्ष्यन्ति ते कस्मादसत्यं नीरजस्तमाः ।।

Those who have become liberated from *rajas* (passion and attachment) and *tamas* (dulness and perplexity) because of the strength of their own penance and knowledge, whose intelligence of the past, the present and the future is clear and unaffected always-these are the trustworthy, the cultured and the very wise. Their word is undoubtable and true. Free from *rajas* and *tamas*, why would they tell a lie ?

32. आत्मेन्द्रियमनोऽर्थानां संनिकर्षात्प्रवर्तते। व्यक्ता तदात्वे या बुद्धिः प्रत्यक्षं सा निरुच्यते।।

That understanding which becomes manifested, issues forth and when there is a proximity of the self, the sense, the mind and the objects of the senses – this is defined as direct observation.

33. प्रत्यक्षपूर्वं त्रिविधं त्रिकालं चानुमीयते। वह्निर्निगूढो धूमेन मैथुनं गर्भदर्शनात्।।
एवं व्यवस्यन्ति अतीतं बीजात्फलमनागतम्। दृष्ट्वा बीजात्फलं जातं इहैव सदृशं बुधाः ।।

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It is by the knowledge of direct examination are inferred the three types and the three times : For instance, the (fact of the existence of) hidden fire (is inferred) by the smoke; (both, of the *present* times); the *past* (event) of the cohabitation (is similarly inferred) by seeing the (present) pregnancy (now visible); and in the same way, the coming in of a fruit (is inferred to be) in *future* by a seed sown far in the past because of seeing here itself on many other similar occasions that any fruit arises from a seed soon (and not just like that i.e. without this rigid sequence of seed-fruit).

34. बुद्धिः पश्यति या भावान् बहुकारणयोगजान्। युक्तिस्त्रिकाला सा ज्ञेयः त्रिवर्गः साध्यते यया।।

That phenomenon which the intellect sees arising from a combination of many reasons is : the stratagem. (It is by such a stratagem) that the events of the three times (past, present and future) are understandable and the three things (viz., the three conditions - progress, stationariness and decline MW.) are achieved. Cs. su. 11. 17-25.

35. परीक्ष्यन्ते व्यवस्थाप्यन्ते वस्तुरूपाणि अनया इति परीक्षा।

The nature of the entities gets investigated and established; hence this is : investigation. Cakra.

36. यथार्थानुभवः प्रमा तत्साधनं च प्रमाणम्।

The true experience or the certain knowledge (of an entity) is its estimate. The means for it is the proof.

(*Proof pramāṇa*) is a means of acquiring *pramā* or certain knowledge, 6 in *Vedānata* viz. *pratyakṣa*, perception by the senses ; *anumāna*, inference ; *upamāna*, analogy or comparison ; *śabda* or *āptavacana*, verbal authority ; revelation or *abhāva-pratyakṣa*, or non-perception, nagative proof *arthāpatti*, inference from circumstances; the *Nyāya* admits only 4, excluding the last two; the *Sāmkhya* only 3 viz. *pratyakṣa, anumāna* and *śabda* ; others increase the number to 9 by adding *sama bhāva* equivalence, *aitihya*, traditional or fallible testimony and *ceṣṭā* gesture. MW).

37. प्रमेय-योऽर्थः प्रमीयते तत्प्रमेयम्; प्रमाता-तत्र यस्येप्सा जिज्ञासा प्रयुक्तस्य प्रवृत्तिः स प्रमाता; येन अर्थं प्रमिणोति तत्प्रमाणम्।

The object whose meaning can be correctly established is the *prameya*, an object of valid experience. Therein, he to whom a desire to know commences and who has taken steps to get the required proof is the estimater or the *pramāta* , the subject intending to get this proof. By which, the meaning gets correctly estimated is the proof, *pramāṇa* - Vatsāyana.

38. अभ्युपगमसिद्धान्तो नाम सा यमर्थमसिद्धमपरीक्षितमनुपदिष्टमहेतुकं वा वादकालेऽभ्युपगच्छन्ति भिषजः।

Hypothetical proposition - abhyupagamasiddhānta (a posited principle or doctrine). A hypothetical proposition is one whose meaning is not settled, unexamined, untaught or unreasonable which the physicians take resort to at the

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time of argument. Cs. vi. 8.37. (Examination of the speciality of (an entity) by positing it even though it is not examined (at all) is the doctrine of hypothetical proposition. Gau. N.S. 1.1.39 PVK)

39. साधकत्तमं कारणं करणमिति।

That reason which is the most important of the causes (that bring about an event) is said to be *the* instrumental (cause of the latter).

40. तदेतत् त्रिविधकारणमध्ये यदसाधारण कारणं तदेवकरणम्।

For instance, in amongst three causes (for an event, that cause which is the most uncommon, that alone is *the* instrumental (cause of the latter).

41. यदन्यस्य सादृश्यमधिकृत्य प्रकाशनं तदौपम्यम्। यथा दण्डेन दण्डकस्य धनुषा धनुस्तम्भस्य।।

That exposition (lit. illumination) which is established in terms of similarity with something else - that is (an argumentation by an) analogy, as for instance (when one illustrates) a little stick by the larger stick, the staff of the bow by the bow (which it makes up). Ca.

f. *an investigative methodology for the examination of diseases*

42. त्रिविधं खलु रोगविशेषविज्ञानं भवतिः तद्यथा-आप्तोपदेशः, प्रत्यक्षम्, अनुमानं चेति।।

There occur indeed three types of expert knowledge of diseases : such as, teachings of the trustworthy authorities, direct examination and inference. Cs. vi. 4.3

43. तत्राप्तोपदेशो नाम आप्तवचनम्। आप्ता ह्यवितर्कस्मृतिविभागविदो निष्प्रीत्युपतापदर्शिनश्च।
तेषामेवंगुणयोगाद्यद्वचनं तत् प्रमाणम्। अप्रमाणं पुनर्मत्तोन्मत्तमूर्खरक्तदुष्टादुष्टवचनमितिः

Therein, teachings by the trustworthy means the words of a trustworthy authority. The trustworthy authorities indeed are those who are not doubtful (in their understanding), are (competently) retentive and who know (their subject) discriminatively, and who can look (at things) with neither partiality nor irritation (i.e. attachment or hatred). It is because of these qualities of theirs that whatever they say becomes (regarded as) authoritative. The words of the intoxicated, the insane and the foolish, is considered unauthoritative, whether they are good or bad.

प्रत्यक्षं तु खलु तद्यत् स्वयमिन्द्रियैर्मनसा चोपलभ्यते।।

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A directly observed (entity) is one which is secured by oneself by (exercising) one's own senses and mind.

अनुमानं खलु तर्को युक्त्यपेक्षः ।।

Inference is that which requires the strategy of a logic.

त्रिविधेन खल्वनेन ज्ञानसमुदायेन पूर्वं परीक्ष्य रोगं सर्वथा सर्वमथोत्तरकालमध्यवसानमदोषं भवति, न हि ज्ञानावयवेन कृत्स्ने ज्ञेये ज्ञानमुत्पद्यते।

If one examines a disease in all ways and the whole of it by the mass of knowledge of these three types, (one's) later exertions (at the time of treatment) will then become indeed blemishless. For, the entirety of knowledge cannot be secured by knowing merely a limb of it Cs. vi. 4.4,5.

44. त्रिविधेत्वस्मिन् ज्ञानसमुदये पूर्वमाप्तोपदेशाज्ज्ञानं, ततः प्रत्यक्षानुमानाभ्यां परीक्षोपपद्यते। किं ह्यनुपदिष्टं पूर्वं यत्तत् प्रत्यक्षानुमानाभ्यां परीक्षमाणो विद्यात्। तस्माद् द्विविधा परीक्षा ज्ञानवतां प्रत्यक्षम्, अनुमानं चः त्रिविधा वा सहोपदेशेन।।

In this mass of knowledge of three types, of first priority is the knowledge one has secured by the teachings of the trust-worthy (viz. what he has learnt during one's training, etc.) Then only one is fit to carry out direct examination and inference. If one is not taught (and trained) earlier, what is there for one to infer and examine? That is why, for the knowledgeable, examination is of two types, direct examination and inference. Or, (rather,) it is of three types, if the teachings (one has received) get included. Cs. vi. 4.5

45. तत्रेदमुपदिशन्ति बुद्धिमन्तः - रोगमेकैकमेवंप्रकोपणमेवंयोनिमेवमुत्थानमेवं आत्मानमेवमधिष्ठानमेववेदनमेवं-संस्थानमेवंशब्दस्पर्शरूपरसगन्धमेवमुपद्रव- मेववृद्धिस्थानक्षयसमन्वितमेवमुदर्कमेवंनामानमेवंयोगं विद्यात्; तस्मिन्नियं प्रतीकारार्था प्रवृत्तिरथवा निवृत्तिरित्युपदेशाज्ज्ञायते।।

The intelligent teach the following, therein: In each and every disease, one should know (by the above methods) that such and such is the provocation (available), the class (to which it belongs), its (details of) upraisal, its nature, its base (or the extent of the substratum in the body), its (attendent) pains, its location and site, its sound, feel, form, (associated) liquids (pus, watery exudations, discharges, etc.) and smell, its attendant complications, its state of flourish or accompaniment of decline, its future course of progress (or prognosis), its name and its conjunctions. Whether (for) this (disease) of these (several) particulars there is to be a commencement of procedures for treating or a cessation (from any attempt towards it) is to be understood by the teaching (that one has received). Cs. vi. 4.6.

46. प्रत्यक्षतस्तु खलु रोगतत्वं बुभुत्सुः सर्वैरिन्द्रियैः सर्वानिन्द्रियार्थानातुरशरीरगतान्, परीक्षेत, अन्यत्र रसज्ञानात्; तद्यथा-अन्त्रकूजनं, सन्धिस्फुटनमङ्गुलीपर्वणां च, स्वरविशेषांश्च, ये चान्येऽपि केचिच्छरीरोपगताः शब्दाः स्युस्तांश्रोत्रेण परीक्षेतः वर्णसंस्थानप्रमाणच्छायाः, शरीरप्रकृतिविकारौ, चक्षुर्वैषयिकाणि यानि चान्यानि अनुक्तानि तानि चक्षुषा परीक्षेतः रसं तु खल्वातुरशरीरगतमिन्द्रियवैषयिकमप्यनुमानादवगच्छेत्, न ह्यस्य प्रत्यक्षेण ग्रहणमुपपद्यते, तस्मादातुरपरिप्रश्नेनैवातुरमुख-रसं विद्यात्, यूकापसर्पणेन त्वस्य शरीरवैरस्यं, मक्षिकोपसर्पणेन

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शरीरमाधुर्यं, लोहितपित्तसंदेहे तु किं धारिलोहितं लोहितपित्तं वेति श्वकाकभक्षणाद्धारिलोहितमभक्षणाल्लोहितपित्तमित्यनुमातव्यम्, एवमन्यानप्यातुरशरीरगतान् रसाननुमिमीतः गन्धास्तु खलु सर्वशरीरगतानातुरस्य प्रकृतिवैकारिकान् घ्राणेन परीक्षेतः स्पर्शं च पाणिना प्रकृतिविकृतियुक्तम्।।

One desirous of understanding the principle of a disease (in a given case) by direct examination, however, should examine the connotations in the body ascertainable by all of one's own senses, except of taste. This is as follows: rumbling of the the bowels, (particularities of) the 'crackings' of the joints and the knuckles of the fingers, the specialities of the voice and whatever other sounds are there in the body - this is to be examined by hearing. Colour, appearance, proportions, aura, the normality and the abnormality of the body, and whatever else are there that form the subject of eyes, not told here are to be observed by the eye. (Particularities of the) taste even though it forms a subject matter of a sense, should be understood by inference, there is no question of securing it by direct examination; therefore, the sense of taste in the mouth of the patient is to be known by enquiry, the distaste of his body by (noting) the going away (from him) of the lice, sweetness of his body by (noting) the approaching of flies and if there is a suspicion of bilious blood, whether the blood is pure or bilious, if it is eaten by dogs or crows, it is to be inferred as pure ; if not eaten, it is bilious and in this way, even the other tastes of the body of the patient are to be inferred. As regards the smell of the whole of the body of the patient, the normal and the abnormal, - this is to be examined by one's smell. Touch is to be ascertained, whether it is normal or abnormal by (one's) hand. Cs.Vi. 4.7

47. इमे तु खल्वन्येऽप्येवमेव भूयोऽनुमानज्ञेया भवन्ति भावाः। तद्यथा-अग्निं जरणशक्त्या परीक्षेत, बलं व्यायामशक्त्या, श्रोत्रादीनि शब्दाद्यर्थग्रहणेन, मनोऽर्थाव्यभिचरणेन, विज्ञानं व्यवसायेन, रजः संगेन, मोहमविज्ञानेन, क्रोधमभिद्रोहेण, शोकं दैन्येन, हर्षमामोदेन, प्रीतिं तोषेण, भयं विषादेन, धैर्यमविषादेन, वीर्यमुत्थानेन, अवस्थानमविभ्रमेण, श्रद्धामभिप्रायेण, मेधां ग्रहणेन, संज्ञां नामग्रहणेन, स्मृतिं स्मरणेन, ह्रियमपत्रपणेन, शीलमनुशीलनेन, द्वेषं प्रतिषेधेन, उपधिमनुबन्धेन, धृतिमलौल्येन, वश्यतां विधेयतया, वयोभक्तसात्म्यव्याधिसमुत्थानानि कालदेशोपशयवेदनाविशेषण, गूढलिंग व्याधि मुपशयानुपशयाभ्यां, दोषप्रमाणविशेषमपचारविशेषेण, आयुषः क्षयमरिष्टैः, उपस्थितश्रेयस्त्वं कल्याणाभिनिवेशेन, अमलं सत्वमविकारेण, ग्रहण्यास्तु मृदुदारुणत्वं स्वप्नदर्शनमभिप्रायं द्विष्टेष्टसुखदुःखानि चातुरपरिप्रश्नेनैव विद्यादिति।।

These happen to be the other states that are to be ascertained similarly by further inferences: such as, the digestive capacity (of a patient) is to be examined by the actual power for digestion he has; strength, by his capacity to do physical exercises; ear and the like, by their (capacity to) grasp their (respective senses); (normality or the otherwise of the) mind, by the deviance or distortion in the sense (it derives in a particular situation); expertise, by the industriousness; passion, by the attachment; infatuation, by the lack of expert understanding; anger, by jealousy; grief, by the miserableness; delight, by the enjoyment; affection, by the pleasure; fear, by the dejection; courage, by the lack of distress; virility, by being up and doing; stability, by non-confusion; faith, by the opinion (he advances); brilliance of mind, by the acuity of his grasping; consciousness, by his capacity to locate the name (of an entity); memory, by recollection; shyness, by his turning away of the face; character, by his (actual) conduct; hatred, by his refusals; fraudulence, by the consequences (that follow); fortitude, by non-cupidity;

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amenability, by disciplinedness; the age, the power of digestion, the compatibilities, the uprisals of the disease and the like, by the specialities (concerned) in the (matters of) time, region, homologation and attendant pains respectively; the disease of hidden symptoms, by administering the homologatory and the non-homologatory (medicines); the specialities of the extent of vitiations, by the specialities of the improprieties (they generate); the decline of the still available span of life, by the premonitory signs of death; that something auspicious is just about to happen, by the intentness of doing good (that a person displays); clear mind, by non-aberration ; the softness or the hard-ness of diarrhoetic discharge however and the seeing of dreams, the opinions (he has), his hatred and likes, happiness and unhappiness are to be understood only by questioning a patient. Cs. vi. 4.8.

48. आप्ततश्चोपदेशेन प्रत्यक्षकरणेन च। अनुमानेन च व्याधीन् सम्यग्विद्याद्विचक्षणः।।
सर्वथा सर्वमालोच्य यथासंभवमर्थवित्। अथाध्यवस्येत्तत्वे च कार्ये च तदनन्तरम्।।
कार्यतत्वविशेषज्ञाः प्रतिपत्तौ न मुह्यति। अमूढः फलमाप्नोति मदमोहनिमित्तजम्।।
ज्ञानबुद्धिप्रदीपेन यो नाविशति तत्ववित्। आतुरस्यान्तरात्मानं न स रोगांश्चिकित्सति।।

The expert should properly understand the diseases by teachings of the trustworthy authorities, the agency of direct examination and inference (as stated above). After considering everything in all ways and knowing as much as possible in principle and actuality, it is only then onwards, he should engage himself (in the act of medical treatment). One who understands the principle of carrying out an action, will not get confused in (correct) perception and will secure a (certain and) unperplexed fruit, which is due to his non-confusion. The knower of the principle who does not enter into the inner feelings and perceptions (lit. inner self) of a patient, by the light of his knowledge, will not treat the diseases. Cs. vi.4.9-11.

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4. Medical Education

(The rigorous efforts illustrated here specially in the sections on dialectical skill for physicians and the criteria for technical criticism should be appreciated and it should be realised that the edifice of Ayurveda rests solely on them)

(a) *evaluation*:

(i) *of the Text for study*

1. बुद्धिमानात्मनः कार्यगुरुलाघवं कर्मफलमनुबन्ध देशकालौ च विदित्वा युक्तिदर्शनाद्भिषग्बुभूषुः शास्त्रमेवादितः परीक्षेत। विविधानि हि शास्त्राणि भिषजांप्रचरन्ति लोके; तत्र यन्मन्येत सुमहद्यशस्विधीर-पुरुषासेवितमर्थबहुलमाप्तजन-पूजितं त्रिविधशिष्यबुद्धिहितमपगतपुनरुक्तदोषमार्षं सुप्रणीतसूत्रभाष्यसंग्रहक्रमं स्वाधारमनवपतितशब्दमकष्टशब्दं पुष्कलाभिधानं क्रमागताथमर्थतत्वविनिश्चय-प्रधानं सगतार्थमसंकुलप्रकरणमाशु-प्रबोधकं लक्षणवच्चोदाहरणवच्च, तदभिप्रपद्येत शास्त्रम्। शास्त्रं ह्येवंविधममल इवादित्यस्तमो विधूय प्रकाशयति सर्वम्।।

(The prospective) intelligent (student of Medical science) who finds himself suited (for the medical profession) after an appraisal of the task (involved in such an education, as to) whether it will prove heavy or light for him; of the rewards; the consequences and the obligations (that will ensue if he takes up such a career); the time (at his disposal) and the place (on which he is situated) should first of all examine a (specific) Treatise (of the science, that suits him on these criteria).

For, various are the treatises currently available in the world, for the physicians (*-a clear statement of the multiple wealth of the Reading material available then*). From among them, he should choose *that* Treatise which has obtained great fame and has been approved by the wise men; comprehensive in scope; held in esteem by the trust-worthy authorities; suitable alike for the understanding of the three grades of students (very intelligent, moderate and slow); free from the faults of repetition; classical (lit. revealed by a seer); arranged in well-written sequences of aphorisms, explanations and summaries; well authenticated; free from vulgar usages and difficult words; rich in synonyms; possessing words of traditionally accepted sense; concerned predominantly with determining the true nature of the things (rather than the mere trivia or just the details); relevant to the theme; orderly (lit. unconfused) in its (presentation of the) topics; immediately elucidatory; and enriched (lit. endowed) with definitions and illustrations.

For, a Treatise of this type, like the clear, unclouded sun illumintates everything (it deals with) dispelling the darkness (from the minds of its readers) Cs. vi. 8.3

(ii) *of the teacher under whom the study is to be undertaken*

2. ततोऽनन्तरमाचार्यं परीक्षेतः तद्यथा-पर्यवदातश्रुतं परिदृष्टकर्माणं दक्षं दक्षिणं शुचिं जितहस्तमुपकरणवन्तं सर्वेन्द्रियोपपन्नं प्रकृतिज्ञं प्रतिपत्तिज्ञमनुपस्कृतविद्यमनहङ्कृतं अनसूयकमकोपनं क्लेशक्षमं शिष्यवत्सलमध्यापक ज्ञापनसमर्थं चेति। एवंगुणो ह्याचार्यः सुक्षेत्रमार्तवो मेघ इव शस्यगुणैः सुशिष्यमाशु वैद्यगुणैः संपादयति।।

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Thereafter, (the aspiring student) should examine the Teacher (under whom he would like to prosecute his studies) – (*a clear statement as to the multiple wealth of the teachers available then*). The teacher should be well versed in theory as well as practice; capable, upright, clean, deft of hand, well equipped (with all the paraphernalia of teaching and practice); possessed of all his faculties; conversant with (the human) nature, as well as the line of treatment (of the patient concerned) having a genuine (and insightful) knowledge of his learning; free from self-conceit and envy; not getting angry; tolerant to troubles; affectionate towards his pupils and capable in exposition (and teaching), as well as suggestivity.

A teacher having such qualities will equip a good student quickly with the qualities of a physician, just as the rain-clouds at the proper season endow the fertile field with the best of crops. Cs. vi. 8.4.

(b) *the attitude of the students and further detalis of studying*

3. तमुपसृत्यारिराधयिषुरुपचरेदग्निवच्च देववच्च राजवच्च पितृवच्च भर्तृवच्चाप्रमत्तः। ततस्तत्प्रसादात् कृत्स्नं शास्त्रमधिगम्य शास्त्रस्य दृढतायामभिधानस्य सौष्ठवे-अर्थस्य विज्ञाने वचनशक्तौ च भूयो भूयः प्रयतेत सम्यक्।।

Approaching such a teacher and desiring to revere him, the student should attend upon him vigilantly, as if he is attending to a sacrificial fire, as on a god, as on the king, as on the father and as on one's patron.

Thereby, having understood through his grace the entire Treatise, the student should for the sake of strengthening his technical knowledge, strive constantly and well to perfect himself in the excellence of his nomenclature (viz. to classify and name diseases, medicines, etc.) special knowledge of the meanings (of the Textual statements) and the capacity of verbal exposition (of his own expertise). Cs. vi. 8.5

अन्तेवासी गुरोर्गृहं कृतकालं वर्षचतुष्टयं आयुर्वेद शिल्पाशिक्षार्थं त्वद्गृहे वसामि इति।

The disciple (tells:) that I shall stay in your house for a complete period of four years in order to receive instruction in Ayurveda and for (?) Engineering. Yagnavalkya Mitaksara tika

4. तत्रोपाया ननुव्याख्यास्यामः – अध्ययनम्, अध्यापनं, तद्विद्यसंभाषा चेत्युपायाः।।

We shall now comment upon the means for securing this objective (by the student); (these are:) studying (oneself, still further), teaching (to others, for instance his own colleagues, in turn) and discussion (lit. conversation) with the experts (*– an effective statement for 'the continuing medical education' of the modern times*) Cs. vi. 8.6.

5. तत्रायमध्ययनविधिः-कल्यः कृतक्षणः प्रातरुत्थायोपव्यूषं वा कृत्वाऽऽवश्यकमुप स्पृश्योदकं देवर्षिगोब्राह्मणगुरुवृद्धसिद्धाचार्येभ्यो नमस्कृत्य समे शुचौ देशे सुखोपविष्टो मनः पुरःसराभिर्वाग्भिः सूत्रमनुक्रामन् पुनः पुनरावर्तयेद् बुद्ध्वा सम्यगनुप्रविश्यार्थतत्वं स्वदोषपरिहारार्थं परदोषप्रमाणार्थं चः एवं मध्यन्दिने अपराह्ने रात्रौ च शश्वदपरिहापयन्नध्ययनमभ्यस्येत्। इत्यध्ययनविधिः।

Now the method of study is: the student who is healthy and has (fully) consecrated his time for study should rise at dawn or while yet a portion of the

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night is left and having performed his necessary ablutions and having saluted the gods, the sages, the cow, the brahmins, the teachers, the adepts and the preceptors and seating himself at ease on an even and clean ground, should with all concentration of his mind on his own utterance, go over the aphorisms in order, repeating them over and over again, all the while understanding their import fully (and also) in order to correct his own faults and to recognise the measure of faults of others. In this way, at noon, afternoon and night he should constantly practice his study without wasting time. This is the methodology of study. Cs. vi. 8. 7

(c) *teaching*

6,7,8. अथाध्यापनविधिः - अध्यापने कृतबुद्धिराचार्यः शिष्यमेवादितः परीक्षेतः तद्यथाप्रशान्तमार्य-प्रकृतिकमक्षुद्रकर्माणमृजचक्षुर्मुखनासावंशं तनुरक्तविशदजिह्वमविकृतदन्तौष्ठममिन्मिनं घृतिमन्तमनहङ्कृतं मेधाविनं वितर्कस्मृतिसंपन्नमुदारसत्वं तद्विद्यकुलजमथवा तद्विद्यवृत्तं तत्वाभिनिवेशिनमव्यङ्गमव्यापन्नेन्द्रियं निभृतमनुद्धतमर्थतत्वभावकमकोपनमव्यसनिनं शीलशौचाचारानुरागदाक्ष्यप्राद-क्षिण्योपपन्नमध्ययनाभिकाममर्थविज्ञाने कर्मदर्शनि चानन्यकार्यमलुब्धम् अनलसं सर्वभूतहितैषिणमाचार्यसर्वानुशिष्टिप्रतिकरमनुरक्तं च, एवं गुण समुदितमध्याप्यमाहुः ।।

The method of teaching. The preceptor who has undertaken to teach should before all else, test the student himself. The latter should be - peaceful, noble in disposition (and) not given to mean acts; straight of eye, face and nose ridge, and slender, red and clean in tongue, flawless in teeth and lips, (and) not possessing an indistinct and nasal voice; persevering; free from egotism; intelligent, endowed with the powers of reasoning and memory; generous in mind; suited to study either by inheritance or by aptitude; not defective in his limbs; unimpaired in his sense faculties; modest, gentle; capable of understanding the (true) nature of things; not irritable; free from addictions of any kind; endowed with character, cleanliness, (good) conduct, affection(ate disposition) and capability; courteous and solely intent on study and in knowing the meaning and in seeing the (actual) work (of medical practice); not doing any other work (apart from study); non greedy, not lazy; desirous of the welfare of all creatures; obedient to all the instructions of his teacher and affectionately attached to him. One who is endowed with all these qualities is said to be fit for being taught. Ca. vi. 8. 8.

(d) *Oaths taken from the student before the medical education commences: (After the requisite initiation ceremony, whose details are fully given, the teacher is to impart the following statements, to every one of which the student should reply 'yes, so let it be' and 'if he behaves as instructed (thereafter), he deserves to be taught; else he does not deserve to be taught'.* Ca. vi. 8. 14.

9. कर्मसिद्धिर्मर्थसिद्धिं यशोलाभं प्रेत्य च स्वर्गमिच्छता भिषजा त्वया गोब्राह्मणमादौ कृत्वा सर्वप्राणभृतां शर्माशासितव्यमहरहरुत्तिष्ठता चोपाविशता च, सर्वात्मना चातुराणामरोग्याय प्रयतितव्यं, जीवितहेतोरपि चातुरेभ्यो नाभिद्रोग्धव्यं, मनसाऽपि च परस्त्रियो नाभिगमनीयास्तथा सर्वमेव परस्वं निभृतवेशपरिच्छदेन भवितव्यम्, अशौण्डेनापापेनापापसहायेन च श्लक्ष्णशुक्लधर्म्यशर्म्यधन्यसत्यहितमितवचसा देशकाल विचारिणा स्मृतिमता ज्ञानोत्यानोपकरणसंपत्सु नित्यं यत्नवता चः न च कदाचिद्राजद्विष्टानां राजद्वेषिणां वा महाजनद्विष्टानां महाजनद्वेषिणां वाऽप्यौषधमनुविधातव्यं, तथा सर्वेषामत्यर्थविकृतदुष्ट- दुःख शीलाचारोपचाराणामनपवादप्रतिकाराणां मुमूर्षूणां च, तथैवासन्निहितेश्वराणां स्त्रीणामनध्यक्षाणां वाः न च कदाचित् स्त्रीदत्तमामिषमादातव्यमननुज्ञातं भर्त्राऽथवा अध्यक्षेण, आतुरकुलं चानुप्रविशता विदितेनानुमतप्रवेशिना सार्धं पुरुषेण सुसंवीतेनावाकशिरसा स्मृतिमता

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स्तिमितेनावेक्ष्यावेक्ष्य मनसा सर्वमाचरता सम्यक् अनुप्रवेष्टव्यम्, अनुप्रविश्य च वाङ्मनोबुद्धीन्द्रियाणि न क्वचित् प्रणिधातव्यान्यन्यत्रातुरादातुरोपकारार्थादातुरगतेष्वन्येषु वा भावेषु, न चातुरकुलप्रवृत्तयो बहिर्निश्चारयितव्याः, हसितं चायुषः प्रमाणमातुरस्य जानताऽपि त्वया न वर्णयितव्यं तत्र यत्रोच्यमानमातुरस्यान्यस्य वाऽप्युपघाताय संपद्यतेः ज्ञानवताऽपि च नात्यर्थमात्मनो ज्ञाने विकत्थितव्यम्, आप्तादपि हि विकत्थमानादत्यर्थमुद्विजन्त्यनेके।।

If you desire success in profession, success in wealth, attainment of fame and heaven after death, you shall pray ever day while you get up or while you sit, for the welfare of all creatures beginning with the cows and the brahmins. With all your attention, endeavour to secure the health of your patients. You shall not desert or injure your patient even for the sake of your life or your living. You shall not commit adultery with others' women even in mind. Similarly you shall not covet others, possessions, even in mind. You shall be modest in your attire and appearance. You should not be a drunkard or a sinful man, nor should you associate (yourself) with the abettors of crime. Your should speak words that are gentle, pure and righteous, pleasing, worthy, true, wholesome and moderate. Your behaviour must be in consideration of time and place and heedful of the past experience (your have gained in all these matters). You shall act always with a view to the acquisition of (new) knowledge and the excellence of the equipments (as are needed for your profession).

No persons, who are hated by the king, or who are (themselves the) haters of the king or who are hated by the public or who are the haters of the public shall receive treatment (from you). Similarly those that are of very unnatural, wicked and miserable character and conduct, those who are not vindicators of their (own) honour (when a challenge has been made) and those who are on the point of death and similarly the women who are not attended by their husbands or guardians, shall not receive treatment (from you).

Never shall you accept any offering of meat by a woman without the behest of her husband or guardian. While entering the patient's house, accompanied with another person well known to you who shows you the way, you shall be well clad, bent of head, self possessed, conducting yourself after repeated consideration of everything in your mind and thus make a proper entry. And, having entered, your speech, mind, intellect and senses shall all be devoted to no thought other than that of being helpful to the patient and of things concerning him only. The peculiar circumstances of the patients' household shall not be made public by you. Even if you know that the patient's life is coming to a close, you shall not mention it there, where if spoken about, it would cause a shock to the patient or to the others. Though you are well knowledgeable, you shall not boast much of your knowledge. Many people get offended by the boastfulness of even those who are otherwise good and authori- tative. Cs.vi.8.13 (*This passage also reflects the standard of medical ethics then*).

10. न चैव ह्यस्ति सुतरमायुर्वेदस्य पारं, तस्मादप्रमत्तः शश्वदभियोगमस्मिन् गच्छेत्, एतच्च कार्यम्, एवं भूयश्च वृत्तसौष्ठवमनसूयता परेभ्योऽप्यागमयितव्यं, कृत्स्नो हि लोको बुद्धिमतामाचार्यः शत्रुश्चाबुद्धिमताम् अतश्चाभिसमीक्ष्य बुद्धिमताऽमित्रस्यापि धन्यं यशस्यमायुष्यं पौष्टिकं लौक्यमभ्युपदिशतो वचः श्रोतव्यमनुविधातव्यं चेति।।

There is no limit at all for the whole of the science of Ayurveda. Therefore, you shall apply yourself to it constantly, never being inattentive. This is how you should act. Being so, you shall learn the excellence of your profession even from without any carping (whatsoever). The entire world is a teacher to the intelligent and an

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enemy to the unintelligent. Hence, considering everything well, you shall listen as well as practise even from your enemy as he teaches words that are commendable, fame securing, life giving, nourishing and popular. Cs. vi.8.14. (– *continuing medical education*).

(e) *expert symposia*

11. संभाषाविधिमत ऊर्ध्वं व्याख्यास्यामः – भिषक् भिषजा सह संभाषेत। तद्विद्यसंभाषा हि ज्ञानाभियोगसंहर्षकरी भवति, वैशारद्यमपि चाभिनिर्वर्तयति, वचनशक्तिमपि चाधत्ते, यशश्चाभिदीपयति, पूर्वश्रुते च सदेहवतः पुनः श्रवणाच्छ्रुतसंशयमपकर्षति, श्रुते चासंदेहवतो भूयोऽध्यवसायमभिनिर्वर्तयति, अश्रुतमपि च कंचिदर्थं श्रोत्रविषयमापादयति, यच्चाचार्यः शिष्याय शुश्रूषवे प्रसन्नः क्रमेणोपदिशति गुह्याभिमतमर्थजातं तत् परस्परेण सह जल्पन् पिण्डेन विजिगीषुराह संहर्षात् तस्मात्तद्विद्यसंभाषामभिप्रशंसन्ति कुशलाः ।

We shall hereafter expound the method of discussion – a physician should discuss with another physician.

It is such an expert discussion indeed that will be responsible for attainment of knowledge along with a thrill. This will also bring about (a real) expertise (among the participants). It will also confer the dialectical skill and illuminate the fame intensively. And, when what is heard earlier is doubtful (in any way), hearing it again in all its corporeality during such a discussion will remove the doubts. it develops well and further the mental apprehension of what has been heard earlier even if there was no doubt. It brings into hearing some meaning that has not been heard at all earlier. And, what the teacher would have imparted to the student as the latter serves him well and only when he is gracious and (that too, only) gradually and in course of time, such a secret connotation, the whole of it in a nut shell, the teacher would spell out in his thrill of disputation. That is why the competent people extol the expert discussions (as a very effective means of securing expertise). Cs. vi.8.15.

12. द्विविधा तु खलु तद्विद्यसंभाषा भवति-सन्धायसंभाषा, विगृह्यसंभाषा च।

Such an expert discussion with the men of the same branch of science is of two kinds – a friendly or a conciliatory discussion and a discussion of challenge or an aggressive (hostile?) discussion.

तत्र ज्ञानविज्ञानवचनप्रतिवचनशक्तिसंपन्नेनाकोपनेनानुपस्कृतविद्येनानसूयकेनानुनेयेनानु- नयकोविदेन क्लेशक्षमेण प्रियसंभाषणेन च सह सन्धायसंभाषा विधीयते। तथाविधेन सह कथयन् विस्त्रब्धः कथयेत्, पृच्छेदपि च विस्त्रब्धः पृच्छते चास्मै विस्त्रब्धाय विशदमर्थं ब्रूयात्, न च निग्रहभयादुद्विजेत निगृह्य चैनं न हृष्येत्, न च परेषु विकत्थेत, न च मोहादेकान्तग्राही स्यात्, न चाविदितमर्थमनुवर्णयित् सम्यक् चानुनयेनानुनयत् तत्र चावहितः स्यात्। इत्यनुलोमसंभाषाविधिः ।

Therein, a conciliatory discussion is prescribed (to be carried out only) with a person who is himself endowed with the knowledge and the experience (of the subject in question), versed in the dialectics of statement and rejoinder, does not get angry and is genuine and insightful in his learning, non-carping, easily persuaded and is (himself) an expert in the art of persuasion, and has tolerance to troubles and a pleasantness of speech.

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When talking with such a person, one should talk confidingly (i.e. in all trust and faith) and even question confidingly. When one is (in trun) questioned thus confidingly, one should tell out the meaning (as he understands it) clearly. One should not be afraid of discomfiture and having discomfited another, one should not rejoice. One should not boast before others, nor should be prejudiced and single tracked because of one's (own) delusion (in the matter). One should not try to expatiate (inordinately) upon what is not known to (oneself). One should persuade gently and in a spirit of goodness and one should pay great heed to this (specific injunction in civility). This is the methodology of discussion in a natural direction. Cs. vi. 8. 16. 17.

13. अत ऊर्ध्वमितरेण सह विगृह्यसंभाषायां जल्पेच्छ्रेयसा योगमात्मनः पश्यन्। प्रागेव च जल्पाज्जल्पान्तरं परावरान्तरं परिषद्विशेषांश्च सम्यक् परीक्षेत। सम्यक् परीक्षाहि बुद्धिमतां कार्यप्रवृत्तिनिवृत्तिकालौ शंसति,तस्मात् परीक्षामभिप्रशंसन्ति कुशलाः ।परीक्षमाणस्तु खलु परावरान्तरमिमान् जल्पकगुणान् श्रेयस्करान् दोषवतश्च परीक्षेत सम्यक्; तद्यथा-श्रुतं विज्ञानं धारणं प्रतिभानं वचनशक्तिरिति, एतान् गुणान् श्रेयस्करानाहुः इमान् पुनर्दोषवतः, तद्यथा-कोपनत्वमवैशारद्यं भीरुत्वमधारणत्वमनवहितत्वमिति। एतान् गुणान् गुरुलाघवतः परस्य चैवात्मनः च तुलयेत्।।

Hereafter, he should engage himself with others (who do not have the above qualities) in an aggressive discussion, prattling on, (and) knowing full well (all the while) his (own) best points. (However,) even before he commences (such a prattling about), he must examine well the points of merit and demerit of the opponent, the difference in excellence between himself and the opponent and the specialities of the assembly (in which the disputation is taking place). It is such a proper examination that (the adepts) praise in determining the wise man's choice of action to engage or not to engage in a discussion. Hence it is that the competent persons extol such (a prior) examination.

As he is (doing thus i.e. carrying out such a hostile discussion), he should (particularly) examine the proportion of the differences between the superior and the inferior, the advantageous and the disadvantageous points of the disputant. This is as follows (viz., in terms of the following aspects); learning, experience, power of retention, orignality, resourcefulness and brilliance and energy of eloquence - these are regarded as the advantageous points in a disputant. These (below) are the disadvantageous points; such as, habit of getting angry or irascibility, lack of clarity (timidity), pusilanimity, lack of retention and carelessness. These qualities of himself and of the opponent must he weigh and find out who out-weighs the other.

तत्र त्रिविधः परः संपद्यते - प्रवरः, प्रत्यवरः, समो वा, गुणविनिक्षेपतः, नत्वेव कात्स्न्र्येन।

In this again there are three kinds of disputants - the superior, the inferior and the equal; but this is in view of the aforesaid qualities of debate alone and not with reference to all the other qualities. Cs. vi. 8. 18,19.

14. परिषत्तु खलु द्विविधा-ज्ञानवती, मूढपरिपच्च। सैव द्विविधा सती त्रिविधा पुनरनेन कारणविभागेन-सुहृत्परिषत्, उदासीनपरिषत्, प्रतिनिविष्टपरिषच्चेति।

Assemblies are of two kinds: the knowledgeable and the stupid. Though of two kinds, they may (also) be considered to be of three kinds by the reason as follows: a friendly assembly, an indifferent assembly and a prejudiced assembly.

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तत्र प्रतिनिविष्टायां परिषदि ज्ञानविज्ञानवचनप्रतिवचनशक्तिसंपन्नायां मूढ़ावा न कथंचित् केनचित् सह जल्पो विधीयतेः मूढायां तु सुहृत्परिषद्युदासीनायां वा ज्ञानविज्ञानवचनप्रतिवचनशक्तीरन्तरेणाप्यदीप्तयशसा महाजन विद्विष्टेनापि सह जल्पो विधीयते।

Therein, in a prejudiced assembly one should not engage in debate under any circumstances and with anyone, whether such an assembly is composed of men of knowledge, experience, dialectical skill of statement and rejoinder or of ignorant and stupid people. If the assembly happens to be one of the ignorant but of the well disposed or of the ignorant but indifferent (type), a person should engage in debate though not fully possessed of learning, experience and dialectical skill, with another who is not of widespread reputation and is despiced by the public. Cs. vi. 8. 20.

15. विगृह्य कथयेद्युक्तया युक्तं च न निवारयेत्। विगृह्यभाषा तीव्रं हि केषांचिद्द्रोहमावहेत्।।
नाकार्यमस्ति क्रुद्धस्य नावाच्यमपि विद्यते। कुशला नाभिनन्दन्ति कलहं समितौ सताम्।।

(Having started an) aggressive discussion one should speak skilfully and never object statements backed by authority. The language of aggressive discussion quickly enrages some people. And there is nothing that an enraged man may not do or say and wise men never commend a quarrel before an assembly of good men. Cs. vi. 8. 22,23.

(f) *medical education (from Susruta)*

(Promise taken by the teacher from the student at the initiation ceremony, before the commencement of the course of instruction)

16. कामक्रोधलोभमोहमानाहंकारेर्ष्यापारुष्यपैशुन्यानृतालस्यायशस्यानि हित्वा, नीचनखरोम्णा शुचिना कषायवाससा सत्यव्रतब्रह्मचर्याभि-वादनतत्परेणावश्यं भवितव्यं, मदनुमतस्थानगमनशयनासन भोजनाध्ययनपरेण भूत्वा मत्प्रियहितेषु वर्तितव्यम्; अतोऽन्यथा ते वर्तमानस्याधर्मो भवति, अफला च विद्या, न च प्राकाश्यं प्राप्नोति।।

"You should give up lust, hunger, greed, infatuation, pride, egotism, jealousy, harshness, backbiting, falsehood, lazyness and indulgence in what brings ill fame to yourself; (you) should wear clean ochre dress, take the vow of truth and celibacy, be always intent on doing proper obeissance to me; (you) should go, sleep, sit, eat and read only as I say and in this way, you should please me in all ways. If it is otherwise, you will incur demerit (*adharma*), your education will be infructuous and your learning will never attain publicity." Ss. su. 2. 6.

17. अहं वा त्वयि सम्यग्वर्तमाने यद्यन्यथादर्शी स्यामेनोभाग्भवेयम् अफलविद्यश्च।।

(Promise to the student given by the teacher in return). "If in case I see wrongly and I am myself not proper (in any teaching or conduct with you), even though you are behaving as above and well, I shall be committing a sin and my own learning will become fruitless" Ss. su. 2. 7.

(i) *Instructional Details*

18. एतद्धि अवश्यमध्येयम्, अधीत्य च कर्माप्यवश्यमुपासितव्यम्, उभयज्ञो हि भिषग् राजार्हो भवति।। यस्तु केवल शास्त्रज्ञः कर्मस्वपरिनिष्ठितः। स मुह्यत्यातुरं प्राप्य प्राप्य भीरुरिवाहवम्।। यस्तु कर्मसु निष्णातो धाष्टर्यच्छास्त्रबहिष्कृतः। स सत्सु पूजां नाप्नोति वधं च अर्हति राजतः।। उभावेतावनिपुणावसमर्थौ स्वकर्मणि।

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अर्धविदधरावेतावेकपक्षाविव द्विजौ।।
ओपध्योऽमृतकल्पास्तु शस्त्राशनिविषोपमाः।
भवन्त्यज्ञैरुपहृतास्तस्मादेतान् विवर्जयेत्।।
स्नेहादिष्वनभिज्ञो यश्छेद्यादिषु च कर्मसु।
स निहन्ति जनं लोभात् कुवैद्यो नृपदोषतः।।
यस्तूभयज्ञो मतिमान् स समर्थोऽर्थसाधने।
आहवे कर्म निर्वोढुम् द्विचक्रः स्यन्दनो यथा।।

(ii) Theory and Practice. This all (i.e., the full extent of the chapters of the text, listed above) should indeed be taught (to the student). After teaching them, he should be necessarily made to attend upon the practice of them also. It is only the physician who knows both (the theory and practice), (that will) become fit to be honoured and given attention to, by the king. There is a saying here as well : He who only knows the knowledge of the Texts and is not well settled in the practice of it, will become confused when confronted with a patient, just like a coward when faced with a battle. He who is an expert in practice but does not care to understand the theory because of his own insolence or effrontery, he will not secure the acclaim of the expert. In fact, he is fit to be killed by the king. Actually, both of these are unskilled and incapable in their own work. Their knowledge is just half of what it should be and is thus as ineffective as in the case of two birds each having only one wing to fly. The medicaments (*ausadhya*) that are virtually ambrosia like become comparable to a terrible weapon, a sudden lightning or a poison, when employed by the ignorant. Therefore you should abandon these (physicians). He who does not know in the practice of actually applying the required unguents and the like or using a surgical instrument of excision and the like, - such a bad physician (merely) kills the public. This is so, (i.e. such a state of affairs becomes possible), because the king (*or the duly constituted authority*) is at fault here (viz., of having allowed him to pursue in such ways). He who is knowing both, (i.e., theory as well as practice) - such a wiseman is capable of achieving the desired objective, just as a chariot with two wheels is capable of accomplishing its objective in the battle. ss. su.3. 47-53

(ii) Method of Teaching and Reading

19. अथ वत्स ! तदेतदध्येयं यथा तथोपधारय मया प्रोच्यमानं-अथ शुचये कृतोत्तरासंगायाव्याकुलायोपस्थितायाध्ययनकाले शिष्याय यथाशक्ति गुरुरुपदिशेत् पदं पादं श्लोकं वाः ते च पदपादश्लोका भूयः क्रमेणानुसंधेयाः, एवमेकैकशो घटयेदात्मना चानुपठेतः अद्रुतमविलम्बिम् अविशंकितमननुनासिकं सुव्यक्ताक्षरमपीडितवर्णमक्षिभ्रुवौष्ठहस्तैरनभिनीतं सुसंस्कृतं नात्युच्चैर्नातिनीचैश्च स्वरैः पठेत्। न चान्तरेण कश्चिद् व्रजेत् तयोरधीयानयोः।।
शुचिर्गुरुपरो दक्षस्तन्द्रानिद्राविवर्जितः
पठन्नेतेन विधिना शिष्यः शास्त्रान्तमाप्नुयात्।।
वाक्सौष्ठवेऽर्थविज्ञाने प्रागल्भ्ये कर्मनैपुणे।
तदभ्यासे च सिद्धौ च यतेताध्ययनान्तगः।।

"Now, dear child, reflect well on how to study these, as I tell you. The teacher should teach one word, a quarter or a full stanza (*śloka*) to the best of his power. The student should come properly dressed (*kṛottara sanga*), should have no distraction and should be sitting near the teacher. These words, quarters and the stanzas should all be scrutinised (in this way) gradually one by one and in

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abundance (i.e., repeatedly). In this way the teacher should bring the (complete) organisation of the whole Text himself and also make the student read along with him (*and formulate this totality finally in his own mind*). One should read neither fast, nor slow, neither hesitantly nor nasally. Every sound should be uttered very clearly and this sound should not be accompained by any distortion or gesticulation, rolling of the eyebrows, shaking of the lips or moving hither and thither of the hands. It should be well cultured, neither very high nor very low. When the teacher and the student are studying, none should walk in between.

The student should be clean, devoted to his teacher, competent, free from lassitude and sleep and (he should) study according to this method, and (thus) obtain the end of the Treatise (i.e., complete it). He should continue to put the due effort till he reaches the end of the study, – in (i) the elegance or speech, (ii) sound knowledge of the meaning, (iii) proficiency, (iv) skill in operative procedures, (v) in practising them all as well as in (vi) attaining the succes". Ss. su.3. 54–56

(iii) Method of Self Study.

20. अधिगतमप्यध्ययनमप्रभाषितमर्थतः खरस्य चन्दनभार इव केवलं परिश्रमकरं भवति।।
यथा खरश्चन्दनभारवाही
भारस्य वेत्ता न तु चन्दनस्य।
एवं हि शास्त्राणि बहून्यधीत्य
चार्थेषु मूढाः खरवद्वहन्ति।।
तस्मात् सविंशमध्यायशतमनुपदपादश्लोकमनुवर्णयितव्यमनुश्रोतव्यं च।।

"Even if you understand what you study, talk about it much and converse on it with your colleagues and experts and carry out such a conversation with all the explanations that are needed (for the occasion). Otherwise, your study will just be a labour done in vain like the load of sandalwood on a mule. For, the mule can appreciate the weight of the load alone and not the fragrance of the sandal. Verily like this, the ignorant carry the weight of the many technical works which they study but are unaware of their significance. Therefore, you should describe the whole of these one hundred and twenty chapters word by word, phrase by phrase and stanza and listen as well to such a description (as carried out) by others" Ss. su.4 "3–5

21. कस्मात् ? सूक्ष्मा हि द्रव्यरसगुणवीर्यविपाकदोषधातुमलाशयमर्म- सिरास्नायुसन्ध्यस्थिगर्भसंभवद्रव्यसमूह-विभागास्तथा प्रनष्टशल्योद्धरणव्रणविनिश्चय भग्नविकल्पाः साध्ययाप्यप्रत्याख्येयता च विकाराणामेवमादयश्चान्ये विशेषाः सहस्त्रशो ये विचिन्त्यमाना विमलविपुलबुद्धेरपि बुद्धिमाकुलीकुर्युः किं पुनरल्पबुद्धेः, तस्मादवश्यमनुपदपादश्लोकम् अनुवर्णयितव्यमनुश्रोतव्यं च।।

"Why? For, subtle indeed are the infinite variations in the drug given, its absorbability, quality, virility and post-assimilative effect: in the vitiation of the body and the tissue where it occurs as well as in the materials and the categories thereof that arise in the reservoirs of impurities in the body, the vulnerable spots, (the countless number of) the veins, the tendons, the joints, the bones and the womb. The alternatives that occur in the surgical operations, the methods of extraction of the *śalya* (i.e., the foreign matter that has entered and is to be surgically removed from the body) or while determining the myriad diversities of the

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wound, the lesions and the ulcers, or while diagnosing the details of the fracture - are all similarly endless. When we attempt (over and above this), a classifying of the changes and the abnormalities of the body as to what can be treated with certainty of a cure, or merely just controlled or as just not treatable at all - we come across a similar and endless (possible number of) variations. When one contemplates on these and the many thousands of other specialisations that are all in the realm of possibility, the intellect of even a very clear mind will get muddled and confused. Why then, to talk about a man of shallow intelligence? Therefore, it is that you should yourself describe and listen to such a description of every word, every phrase and every stanza of this Text (*and thus endeavour in all ways to fix the ethos of the whole firmly within yourself*). Ss. su. 4.5

22. अन्यशास्त्रोपपन्नानां चार्थानामिहोपनीतानामर्थवशात्तेषां तद्विद्येभ्य एव व्याख्यानमनुश्रोतव्यं, कस्मात् ? न ह्येकस्मिन् शास्त्रे शक्यः सर्वशास्त्राणाम् अवरोधः कर्तुम्। एकं शास्त्रमधीयानो न विद्याच्छास्त्रनिश्चयम्।

तस्माद्बहुश्रुतः शास्त्रं विजानीयाच्चिकित्सकः।।
शास्त्रं गुरुमुखोद्वीर्णमादायोपास्य चासकृत्।
यः कर्म कुरुते वैद्य स वैद्योऽन्ये तु तस्कराः।।
औपधेनवमौरभ्रं सौश्रुतं पौष्कलावतम्।
शेषाणां शल्यतन्त्राणां मूलान्येतानि निर्दिशेत्।।

"Moreover, in case I mention here a connotation that actually belongs to some other technical work, listen to the commentaries given by the experts of these different works (also); do not be just content with what I state. Why? For, it is just not possible to encompass the subject matter of all the Treatises (*śāstras*) in a single work. You know, there is a saying also here. One who studies only one Treatise will not understand the correct determinations of his own treatise (even). Therefore listen from many quarters. A physician can appreciate his science only that way. Secure your learning by learning from the teachers (of the other subjects concerned); study it (i.e., what you have known already) continuously. One who practices his medicine only then, is a physician. Others are just thieves. The Treatises of Aupadhenava, Aurabhra, Sausruta and Pauskalavata - these form the source of the rest of the science of surgery (not covered here)." Ss. su.4. 6-9.

g. *medical learning*

23. इमानि खलु तावदिह कानिचित् प्रकरणानि भिषजां ज्ञानार्थमुपदेक्ष्यामः। ज्ञानपूर्वकं हि कर्मणां समारम्भं प्रशंसन्ति कुशलाः। ज्ञात्वा हि कारण-करण-कार्ययोनि-कार्य- कार्यफला-नुबन्ध-देश-कालप्रवृत्युपायान् सम्यगभिनिर्वर्तमानः कार्याभिनिर्वृत्ताविष्टफलानुबन्धं कार्यमभिनिर्वर्तयत्यनतिमहता यत्नेन कर्ता।।

We shall now teach some topics (totally ten) for the enlightenment and knowledge of the physicians. The competent extol the commencement of actions only after a full knowledge of it beforehand.

If a man accomplishes an action having known fully the cause, the means, the source of action, the action, the fruit of the action, the consequence, the place, the time, the endeavour, the device - he accomplishes the requisite action and obtains the desired result without much difficulty. Cs. vi.8.68.

24. तत्र कारणं नाम तद् यत् करोति, स एव हेतुः, स कर्ता।।

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The cause is that which acts; that itself is the reason; (and) that, the agent:

करणं पुनस्तद् यदुपकरणायोपकल्पते कर्तुः कार्याभिनिर्वृत्तो प्रयतमानस्य।।

The means or, the instrumentalities are the things which the doer prescribes when he undertakes the performance of an action.

कार्ययोनिस्तु सा या विक्रियमाणा कार्यत्वमापद्यते।।

The source of action is that whose ultimate metamorphosis attains the actionness.

कार्यं तु तद्यस्याभिनिर्वृत्तिमभिसन्धाय कर्ता प्रवर्तते।।

The action is that for the fulfilment of which the doer endeavours.

कार्यफलं पुनस्तद् यत्प्रयोजना कार्याभिनिर्वृत्तिरिष्यते।।

The fruit of action is the purpose for whose accomplishment an action is undertaken.

अनुबन्धः खलु स यः कर्तारमवश्यमनुबध्नाति कार्यादुत्तरकालं कार्यनिमित्तः शुभो वाऽप्यशुभो भावः।।

The consequence is that state which necessarily relates the doer with the after-effect of the action and because of the action (carried out), whether it be happy or unhappy.

देशस्त्वधिष्ठानम्।।

Place is the region of action.

कालः पुनः परिणामः।।

Time is change.

प्रवृत्तिस्तु खलु चेष्टा कार्यार्थाः सैव क्रिया, कर्म, यत्नः, कार्यसमारम्भश्च।।

The endeavour is the activity so as to serve the action undertaken; that itself is the action, the performance, the effort and the beginning of a work.

उपायः पुनस्त्रयाणां कारणादीनां सौष्ठवमभिविधानं च सम्यक् कार्यकार्य-
फलानुबन्धवर्ज्यानां, कार्याणामभिनिर्वर्तक इत्यतस्तूपायः कृते नोपायार्थोऽस्ति,
न च विद्यते तदात्वे, कृताच्चोत्तरकालं फलं, फलाच्चानुबन्ध इति।।

The device is the excellence of the first three in this list beginning from 'cause' and their proper integration, excluding action, fruit of action and consequence of action. As it accomplishes the action, it is called the means. Cs. vi.8. 69-78.

25. एतद् दशविधमग्रे परीक्ष्यं, ततोऽनन्तरं कार्यार्था प्रवृत्तिरिष्टा।
तस्माद्भिषक् कार्यं चिकीर्षुः प्राक् कार्यसमारम्भात् परीक्षया केवलं परीक्ष्यं परीक्ष्य कर्म समारभेत कर्तुम्।।

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All these ten characteristics of action should (first) be investigated and only afterwards the undertaking of the action is desirable. Hence, the physician desirous of action must commence his work after thoroughly investigating all those factors that deserve to be investigated. Cs. vi.8. 79.

26. द्विविधा तु खलु परीक्षा ज्ञानवतां - प्रत्यक्षम्, अनुमानं च। एतद्धि द्वयमुपदेशश्च परीक्षा स्यात्। एवमेषा द्विविधा परीक्षा, त्रिविधा वा सहोपदेशेन।।

For the knowledgeable there are only two methods of examination : direct observation and inference. These two and the authoritative texts are the methods of examination. Thus there are two methods of examination, or three, if (one) includes authoritative texts. Cs. vi.8. 83.

27. दशविधं तु परीक्ष्यं कारणादि यदुक्तमग्रे, तदिह भिषगादिषु संसार्य संदर्शयिष्यामः - इह कार्यप्राप्तौ कारणं भिषक्, करणं पुनर्भेषजं, कार्ययोनिर्धातुवैषम्यं, कार्यं धातुसाम्यं, कार्यफलं सुखावाप्तिः, अनुबन्धः खल्वायुः, देशो भूमिरातुरश्च, कालः पुनः संवत्सरश्चातुरावस्था च, प्रवृत्तिः प्रतिकर्मसमारम्भः, उपायस्तु भिषगादीनां सौष्ठवमभिविधानं च सम्यक्।।

How the ten topics commencing from the cause onwards as spoken above should be applied to physicians and the like we shall now indicate: In any given therapeutic action, the cause of the doer is the physician, the means are the medicaments, the source of action is the pathological condition of the body-elements, the purpose is the attainment of equilibrium of body elements, the fruit of action is the attainment of happiness by the patient, the consequence is life, the place is the country of the patient, and time is the season or the stage of the disease, endeavour is the beginning of the treatment and the device is the excellence of the proper adjustment of the physician, etc. Cs. vi. 8.84.

h. *dialectical skill for the medical professionals*

28. तत्रेदं वादमर्यादालक्षणं भवति - इदं वाच्यम्, इदमवाच्यम्, एवं पराजितो भवतीति।।

This constitutes the characteristics of the limitation (that one should know, when carrying out an) argumentation: viz., (the clear ascertainment by oneself that) this is what I should speak, this is what I should not speak and if I speak thus, I shall get defeated. Ca. vi.8.26.

29. इमानि तु खलु पदानि भिषग्वादमार्गज्ञानार्थमधिगम्यानि भवन्तिः तद्यथा-वादः, द्रव्यं, गुणाः, कर्म, सामान्यं, विशेषः, समवायः, प्रतिज्ञा, स्थापना, प्रतिष्ठापना, हेतुः, दृष्टान्तः, उपनयः, निगमनम्, उत्तरं, सिद्धान्तः, शब्दः, प्रत्यक्षम्, अनुमानम्, ऐतिह्यम्, औपम्यं, संशयः, प्रयोजनं, सव्यभिचारं, जिज्ञासा, व्यवसायः, अर्थप्राप्तिः, संभवः, अनुयोज्यम्, अननुयोज्यम्, अनुयोगः प्रत्यनुयोगः, वाक्यदोषः, वाक्यप्रशंसा, छलम्, अहेतुः, अतीतकालम्, उपालम्भः, परिहारः, प्रतिज्ञाहानिः, अभ्यनुज्ञा, हेत्वन्तरम्, अर्थान्तरम्, निग्रहस्थानमिति।।

The following are the technical terms that become necessary to be learnt to ascertain the course of argument among the physicians. These are: Debate, Substance, Attribute, Action, Generality, Particularity, Coexistence, Proposition, Proof, Counterproof, Cause, Example, Application, Deduction, Rejoinder, Conclusion, Verbal testimony, Direct perception, Inference, Tradition, Analogy, Doubt, Purpose, Exceptionable statement, Inquiry, Determination, Implied meaning, Source, Imperfect

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statement, Perfect statement, Question, Further question, Flaw of speech, Excellence of speech, Quibbling, Fallacy, Inopportune or Too-late-in-time, Censure, Amendment or Correction, Abandonment of proposition, Acceptance, Fallacious reason, Confusion and Point of discomfiture (*forty-four in all*). Cs. vi. 8.27.

30. तत्रवादो नाम स यत् परेण सह शास्त्रपूर्वकं विगृह्य कथयति। स च द्विविधः संग्रहेण-जल्पः, वितण्डा च। तत्र पक्षाश्रितयोर्वचनं जल्पः, जल्पविपर्ययो वितण्डा। यथा-एकस्य पक्षः पुनर्भवोऽस्तीति, नास्तीत्यपरस्यः तौ च स्वस्वपक्षहेतुभिः स्वस्वपक्षं स्थापयतः, परपक्षमुद्भावयतः एष जल्पः। जल्पविपर्ययो वितण्डा। वितण्डा नाम परपक्षे दोषवचनमात्रमेव।।

Debate is what one tells in a spirit of challenge while discussing with another but with the backing of the authoritative Texts. This in brief is of two kinds: the constructive debate *jalpa* and the destructive debate or *vitanda* Argument establishing one's own position is *jalpa* or, a constructive debate. The contrary to it (i.e. a continual attempt only at refuting whatever is another's position) is *vitanda*, destructive debate. Thus for instance, when one says there is rebirth and the opponent that there is not and each adduces reasons for his own position, the debate is *jalpa*. The contrary to it is *vitanda* (a cavil, a captious objection), the destructive debate, which is limited only to pointing out the defects in the opponent's position. Cs. vi.8.28.

31. अथ प्रतिज्ञा - नाम साध्यवचनः यथा- नित्यः पुरुष इति।।

As regards Proposition, it is the statement that has to be proved (at the end of the argument), for example, the statement 'Man is eternal'. Cs. vi. 8.30.

32. अथ स्थापना-स्थापना नाम तस्या एव प्रतिज्ञाया हेतुदृष्टान्तोपनयनिगमनैः स्थापना। पूर्वं हि प्रतिज्ञा, पश्चात् स्थापना, किं ह्यप्रतिज्ञातं स्थापयिष्यति, यथा- नित्यः पुरुष इति प्रतिज्ञाः हेतुः- अकृतकृत्वादितिः दृष्टान्तः - यथाऽऽकाशमितिः उपनयः - यथा चाकृतकमाकाश, तच्च नित्यं, तथा पुरुष इतिः निगमनं-तस्मान्नित्यं इति।।

As regards Proof, (this constitutes) the establishing of a proposition by means of reason, example, application and deduction. First, the proposition is to be made. Then it is to be proved. How can a thing that has not been proposed at all, be proved? For example, there is a proposition, such as 'Man is eternal'. (The) cause (or the reason here) is (stating, for instance, that he is eternal) as he is not made by any one (else). (The) Example even as space is (also) not made (by any one else). (The) Application is (stating that) as space is not made by any one (else) and (still) is eternal, even so is man eternal. (The) Deduction is (to state that) hence he is eternal. Cs. vi. 8.31.

33. अथ प्रतिष्ठापना-प्रतिष्ठापना नाम या तस्या एव परप्रतिज्ञाया विपरीतार्थ स्थापना। यथा- अनित्यः पुरुष इति प्रतिज्ञाः हेतुः - ऐन्द्रियकत्वादितिः दृष्टान्तः - यथा घट इति, उपनयो-यथा घट ऐन्द्रियकः स चानित्यः, तथा चायमितिः निगमनं-तस्मादनित्य इति।।

As regards Counter-proof it is that which establishes the contrary of the opponent's proposition. For instance, 'Man is not eternal' is a proposition. (The) cause-(here is:) 'because man is a sense object'. (The) Example is (to state that, this is so) 'just as a pot is'. The Application (is to state that) the pot being a sense

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object is not eternal and so is this man ! (The) Deduction (is, to say that) hence he is not eternal. Cs. vi. 8.52.

34. अथ हेतुः - हेतुर्नामोपलब्धिकारणं तत् प्रत्यक्षम्, अनुमानम्, ऐतिह्यम्, औपम्यम् इति एभिर्हेतुभिः यदुपलभ्यते तत् तत्त्वम्।।

Now the Cause-Cause is the means of acquiring knowledge. This is (of four kinds): direct experience, inference, tradition and analogy. The knowledge that is obtained by these (four kinds of) cause is 'the principle' (of a phenomenon). Cs. vi.8.33.

35. अथ दृष्टान्तः - दृष्टान्तो नाम यत्र मूर्खविदुषां बुद्धिसाम्यं, यो वर्ण्यं वर्णयति। यथा- अग्निरुष्णः, द्रवमुदकं, स्थिरा पृथिवी, आदित्यः प्रकाशक इति यथा अदित्यः प्रकाशकस्तथा सांख्यज्ञानं प्रकाशकमिति।।

Now, the Example - Example is that which describes the similarity of the things (concerned) in a way which is intelligible to the wise and the unwise alike. For instance, (when it is stated) 'fire is hot, water is fluid, earth is firm, sun illuminates and so on' (or), 'the knowledge of Sankhya (a system of philosophy where the entities are meticulously numbered) is as illuminative as the sun'. Cs. vi. 8.34.

36. उपनयो निगमनं चोक्तं स्थापनाप्रतिष्ठापनाव्याख्यायाम्।।

Application and Deduction have been described while explaining Proof and Counter proof. Cs. vi.8.35.

37. अथोत्तरम् - उत्तरं नाम साधर्म्योपदिष्टे हेतौ वैधर्म्यवचनं, वैधर्म्योपदिष्टे वा हेतौ साधर्म्यवचनम्। यथा - 'हेतुसधर्माणो विकाराः, शीतकस्य हि व्याधेः हेतुभिः साधर्म्यं हिमशिशिरवातसंस्पर्शाः', इति ब्रुवतः परो ब्रूयात्- हेतुविधर्माणो विकाराः, यथा शरीरावयवानां दाहौष्ण्यकोथप्रपचने हेतुवैधर्म्यं हिमशिशिरवात- संस्पर्शा इति। एतत् सविपर्ययमुत्तरम्।।

Now, the Rejoinder - Rejoinder is a retort which asserts the disparity between a cause and its effect when their similarity has been adduced. For instance, when it is said, "The disease of cold is similar in nature to its cause such as contact with snow and the cold wind", the opponent should declare, "the diseases are dissimilar in nature to these causes", for, the heat, the burning, the sloughing and the suppuration (that are commonly found in a patient of cold) are dissimilar to the touch of dew and the winter wind (which is what is usually associated with anything cold, popularly). This is called rejoinder in its positive and negative forms. Cs. vi.8.36.

38. अथ सिद्धान्तः - सिद्धान्तो नाम स यः परीक्षकैः बहुविधं परीक्ष्य हेतुभिश्च साधयित्वा स्थाप्यते निर्णयः। स चतुर्विधः - सर्वतन्त्रसिद्धान्तः प्रतितन्त्रसिद्धान्तः, अधिकरणसिद्धान्तः, अभ्युपगमसिद्धान्तः चेति। तत्र सर्वतन्त्रसिद्धान्तो नाम तस्मिंस्तस्मिन् सर्वस्मिन् तन्त्रे तत्त् प्रसिद्धः यथा सन्ति निदानानि, सन्ति व्याधयः, सन्ति सिद्ध्युपायाः साध्यानामिति। प्रतितन्त्रसिद्धान्तो नाम तस्मिंस्तस्मिन्नेकैकस्मिंस्तन्त्रे, तत्तत् प्रसिद्धं यथा- अन्यात्राप्टौ रसाः षडत्र, पंचेन्द्रियाण्यत्र षडिन्द्रयाण्यन्यत्र तन्त्रे, वातादिकृताः सर्वे विकारा यथान्यत्र, अत्र वातादिकृता भूतकृताश्च

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प्रसिद्धाः । अधिकरण-सिद्धान्तो नाम स यस्मिन्नधिकरणे प्रस्तूयमाने सिद्धान्यन्यान्यप्यधिकरणानि भवन्ति, यथा - 'न मुक्तः कर्मानुबन्धि कुरुते, निस्पृहत्वात्' इति प्रस्तुते सिद्धाः कर्मफलमोक्ष-पुरुष-प्रेत्यभावाभवन्ति। अभ्युपगमसिद्धान्तो नाम स यमर्थमसिद्धं अपरीक्षितमनुपदिष्टमहेतुकं वा वादकालेऽभ्युपगच्छन्ति भिषजः; तद्यथा-द्रव्यं प्रधानमिति कृत्वा वक्ष्यामः, गुणाः प्रधानमिति कृत्वा वक्ष्यामः, वीर्यं प्रधानमिति कृत्वा वक्ष्यामः, इत्येवमादिः । इति चतुर्विधः सिद्धान्तः ।

Now the Conclusion. Conclusion is what gets established by the investigators after examining (an entity) in various ways and deduced by means of (diverse) reasons. Such a conclusion is of four kinds: a universal conclusion, a particular conclusion, an implied conclusion and a hypothetical conclusion. Among these, the universal conclusion is that which is found in each and every treatise on the subject, as being famous; such as (the statements:) these are the causes, these are the diseases and these are the means for remedying the curable diseases (among them). The particular conclusion is that which is found in a treatise of a particular branch of science. For instance, (the statements like) "There are said to be eight *rasas*,-here they are six; there are five sense organs here but six in others; all diseases are caused by *vāta* and the like elsewhere, here they are caused by *vāta* and the like or by evil spirits and the like". The implied conclusion is that which is determined by implication in the course of a statement of the facts (itself); for instance (in the statements:) 'the liberated souls do not act in a *karma*-bound manner as they are indifferent to the fruits of action', if and when such a general statement gets established, other conclusions like the (veracity or otherwise, of) the fruits of action, liberation, the individual (life) and rebirth are (all) concluded by implication. The hypothetical conclusion is that which is taken for granted by physicians at the time of debate though it has neither been established nor investigated or taught and not even based on reason; for instance, (the statement:) "we shall (now proceed to) speak, taking substance to be primary, taking attributes to be primary, taking actions to be primary and so on'. These are the four kinds of conclusions. Cs. vi.8.37.

39. अथ शब्दः - शब्दो नाम वर्णसमाम्नायः; स चतुर्विधः - दृष्टार्थश्च अदृष्टार्थश्च, सत्यश्च, अनृतश्चेति। तत्र दृष्टार्थो नाम-त्रिभिर्हेतुभिर्दोषाः प्रकुप्यन्ति, षड्भिरुपक्रमैश्च प्रशाम्यन्ति, सति श्रोत्रादिसद्भावे शब्दादिग्रहणमिति। अदृष्टार्थः पुनः - अस्ति प्रेत्यभावः, अस्ति मोक्ष इति। सत्यो नाम - यथार्थभूतः, सन्त्यायुर्वेदोपदेशाः, सन्ति सिद्ध्युपायाः साध्यानां व्याधीनां, सन्त्यारम्भफलानीति। सत्यविपर्ययश्चानृतः ।।

Now the Word or the Verbal testimony - Word is a collection of letters. It is of four kinds: of an observable meaning, of an unobservable meaning, true and false. Of these, the word of observable meaning (i.e. meaning is clearly explicit) is for instance (like the statement:) "the vitiations get provoked by three causes, alleviated by six lines of treatment; when the hearing is good, the sound of (these) words and the like are grasped" and so on. The word of unobservable meaning is such as "there is rebirth, there is liberation" (viz. the meaning of these words is not explicit in themselves). The true word is what is faithful to reality, such as (the statements): "there are an Ayurvedic instructions ; there are the means of cure for curable diseases; efforts bear fruit". The contrary to truth is what is false. Cs. vi.8.38.

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40. अथ प्रत्यक्षम् - प्रत्यक्षं नाम तद्यदात्मना चेन्द्रियैश्च स्वयमुपलभ्यते; तत्रात्मप्रत्यक्षाः सुखदुःखेच्छाद्वेषादयः, शब्दादयास्तुइन्द्रियप्रत्यक्षाः ।।

Now the Direct perception-direct perception is that which is perceived by the mind and the sense directly. Of them, happiness, sorrow, like and dislike and so on, are perceived by the mind. Sound and the others are perceived by the senses. Cs. vi.8.39.

41. अथानुमानम् - अनुमानं नाम तर्को यक्त्यपेक्षः; यथा- अग्निं जरणशक्त्या, बलं व्यायामशक्त्या, श्रोत्रादीनि शब्दादिग्रहणेनेत्येवमादिः ।।

Now the Inference-inference is a logical (conclusion) based on reason. For instance, we infer (the existence of a) digestive fire (and its strength) by the power of digestion (we can see in a patient); strength (in the body) from the energy to carry out physicial exercises (that the patient displays); and, the ears and the like (viz., the acuity of the sense organs) by their capacity to grasp the sound and the like. Cs. vi.8.40.

42. अथैतिह्यम् - ऐतिह्यं नामाप्तोपदेशो वेदादिः ।।

Now Tradition - Tradition is the instruction of the trustworthy such as *vedas* and the like. Cs. vi.8.41.

43. अथौपम्यम् - औपम्यं नाम यदन्येनान्यस्य सादृश्यमधिकृत्य प्रकाशनं यथा- दण्डेन दण्डकस्य, धनुषा धनुःस्तम्भस्य, इष्वासेनाऽऽरोग्यदस्येति ।।

Now Analogy - Analogy is the bringing to light on the basis of the ..iutual similarity between two entities. For instance, the disease *Dandaka* (The Staff) is explained by the word 'staff' whose quality is wooden rigidity; the disease *Dhanustambha* (bent like an arrow) is *because of the bow (both dandaka and dhanustambha are neurological diseases when the body becomes stiff or bent like a bow respectively)*, and the physician is known as Iswara (the Lord), the releaser of the arrow that hits the mark, for like the bowman he successfully hits the cause of disease and restores good health. Cs. vi. 8.42.

44. अथ संशयः संशयो नाम सन्देहलक्षणानुसन्दिग्धेष्वर्थेष्वनिश्चयः; - यथा- दृष्टा ह्यायुष्मल्लक्षणैरुपेताश्चानुपेताश्च तथा सक्रियाश्चाक्रियाश्च पुरुषाः शीघ्रभंगाः चिरजीविनश्च एतदुभयदृष्टत्वात् संशयः - किमस्ति खल्वकालमृत्युरुत नास्तीति ।।

Now Doubt - Doubt is uncertainty regarding the meaning of things; as in (statements like:) "some people are seen with the signs of long life and some without them; some receive treatment and some do not; and there are people who die quickly and who live long; - having thus seen both, the doubt arises: 'Is there a premature death or not?". Cs. vi.8.43.

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45. अथ प्रयोजनं - प्रयोजनं नाम यदर्थमारभ्यन्त आरम्भाः; यथा- यद्यकालमृत्युः अस्ति ततोऽहमात्मानमायुष्यैरुपचरिष्याम्यनायुष्याणि च परिहरिष्यामि, कथं मामकालमृत्युः प्रसहेतेति।।

Now the Purpose - Purpose is that for the sake of which the efforts are made. For instance when a person says 'if there is untimely death, I shall treat myself in such a way as to aid the factors that strengthen my life and avoid the causes that make for the shortening of life. How then will premature death overpower me?' Cs. vi.8.44.

46. अथ सव्यभिचारं - सव्यभिचारं नाम यव्यभिचरणं; यथा- भवेदिदमौपधमस्मिन् व्याधौ यौगिकमथवा नेति।।

Now Exceptional Statement - (This) is what admits a deviation from the path taken up, as for instance (the statement), "in the disease, this (particular procedure) may act as a remedy or sometimes, it may not". Cs. vi.8.45.

47. अथ जिज्ञास्य-जिज्ञासानाम परीक्षा; यथा भेषजपरीक्षोत्तरकालमुपदेक्ष्यते।।

Now Inquiry - Inquiry is an examination, as described later on in the case of Investigation of Remedies. Cs. vi.8.46.

48. अथ व्यवसायः - व्यवसायो नाम निश्चयः; वातिक एवायं व्याधिः, इदमेवास्य भेषजं चेति।।

Determination - Determination is an ascertainment, as (in the statement) "this is a disease due to *vāta* and *this* is what is its remedy". Cs. vi.8.47

49. अथार्थप्राप्तिः - अर्थप्राप्तिर्नाम यत्रैकेनार्थेनोक्तेनापरस्यार्थस्यानुक्तस्यापि सिद्धिः; यथा- नायं संतर्पणसाध्यो व्याधिरित्युक्ते भवत्यर्थप्राप्तिः - अपतर्पणसाध्योऽयमिति, नानेन दिवा भोक्तव्यमित्युक्ते भवत्यर्थप्राप्तिः - निशि भोक्तव्यमिति।।

Now Implied meaning - (This) is the attainment of another meaning not expressed from one that has been expressed; for instance (in a statement) "if it is said that this disease is not amenable to impletion therapy, the implied meaning is: "it is amenable to depletion therapy"; "he should not eat by day" - the implied meaning is: "should eat by night" Cs. vi.8.48.

50. अथ संभवः - यो मतः संभवति स तस्य संभवः; यथा- षड्धातवो गर्भस्य, व्याधेरहितं, हितमारोग्यस्येति।।

Now Source - That from where a thing is born, *that* is source; for instance (what is seen in the statements:) "the six protoelements are the source of the foetus"; "what is unwholesome is the source of disease"; "the wholesome is the source of health". Cs. vi.8.49.

51. अथानुयोज्यम्-अनुयोज्यं नाम यद्वाक्यं वाक्यदोषयुक्तं तत्। सामान्यतो व्याहतेष्वर्थेषु वा विशेषग्रहणार्थं यद्वाक्यं तदप्यनुयोज्यं; यथा- 'संशोधनसाध्योऽयं व्याधिः', इत्युक्ते 'किं वा विरेचनसाध्यः' इत्यनुयुज्यते।।

Now Imperfect Statement - Imperfect statement is that utterance which is beset with defects of speech, as also utterance, which, when stated in a general way requires (further) clarification to get the special meaning (intended there). For

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instance, when it is said "this disease is curable by purification" (this) engenders (further) question (such as)" is it amenable to emesis or purgation" (which are both the means comprehended by purification). Cs. vi.8.50.

52. अथाननुयोज्यम्-अननुयोज्यं नामातो विपर्ययेण; यथा- अयमसाध्यः।।

Now Perfect Statement - (This) is (what is) contrary to the above (type of statement); for instance (when one says without any doubt) "this disease is incurable". Cs. vi.8.51.

53. अथानुयोगः - अनुयोगो नाम स यत् तद्विद्यानां तद्विद्यैरेव सार्धं तन्त्रे तन्त्रैकदेशे वा प्रश्नः प्रश्नैकदेशो वा ज्ञानविज्ञानवचनप्रतिवचनपरीक्षार्थमादिश्यते। यथा- 'नित्यः पुरुषः' इति प्रतिज्ञाते यत् परः 'को हेतुः' इत्याह, सोऽनुयोगः।।

Now Question - Question is that which an opponent puts when two persons of the same branch of science discuss a general or a particular topic in a common treatise or a chapter in the same treatise, in order to test the knowledge, the experience and the dialectical skill of the speaker. For instance, when one states 'man is eternal', the other asks 'what is the cause'. That is a question. Cs. vi.8.52.

54. अथ प्रत्यनुयोगः - प्रत्यनुयोगो नामानुयोगस्यानुयोगः, यथा - अस्यानुयोगस्य पुनः को हेतुरिति।।

Now Further Question - (This is) a question about the question; for instance, when a question is answered, the disputant questions further. 'What is the cause of *that*'. Cs. vi.8.53.

55. अथ वाक्यदोषः-वाक्यदोषो नाम यथा खल्वस्मिन्नर्थे न्यूनम् अधिकम्, अनर्थकम्, अपार्थकं, विरुद्धं चेति; एतानि ह्यन्तरेण न प्रकृतोऽर्थः प्रणश्येत्। तत्र न्यूनं- प्रतिज्ञाहेतूदाहरणोपनयनिगमनानामन्यतमेनापि न्यूनं न्यूनं भवति; यद्वा बहूपदिष्टहेतुकमेकेन हेतुना साध्यते तच्च न्यूनम्। अथाधिकम्-अधिकं नाम यन्न्यूनविपरीतं, यद्वा आयुर्वेदे भाष्यमाणे बार्हस्पत्यमौशनसमन्यद्वा यत्किंचिदप्रतिसंबद्धार्थमुच्यते, यद्वा संबद्धार्थमपि द्विरभिधीयते तत् पुनरुक्तदोषत्वादधिकं; तच्च पुनरुक्तं द्विविधम् - अर्थपुनरुक्तं शब्दपुनरुक्तं च: तत्रार्थपुनरुक्तं यथा - भेषजमौषधं साधनमिति, शब्द-पुनरुक्तं पुनर्भेषजं भेषजमिति। अथानर्थकम्-अनर्थकं नाम यद्वचनम् अक्षरग्राममात्रमेव स्यात् पंचवर्गवन्न चार्थतो गृह्यते। अथापार्थकम्- अपार्थकं नाम यदर्थवच्च परस्परेणासंयुज्यमानार्थकं; यथा- चक्र-न (त) क्र-वंश-वज्र-निशाकरणा इति। अथ विरुद्धं-विरुद्धं नाम यद्दृष्टान्तसिद्धान्तसमयैर्विरुद्धं; तत्र पूर्वं दृष्टान्तसिद्धान्तावुक्तौ; समयः पुनस्त्रिधा भवति; यथा- आयुर्वेदिक- समयः, याज्ञिकसमयः, मोक्षशास्त्रिकसमयश्चेति।।

Now Flaws of Speech - Flaw of speech is when in the context of a particular meaning, (what is spoken) is insufficient, superfluous, meaningless, wrong and contradictory; if these were not there, the meaning intended would not have become lost. Now insufficient is when it (i.e. speech) is deficient, if any one of (the factors such as) proposition, cause, example, application and deduction, is found wanting; when there are many causes for proving a thing and yet one proves it by adducing only one cause, *that* also is a deficiency. Superfluous is what is contrary to the insufficient; when the discussion is about Ayurveda, to cite the authorities of Brhaspati or Usanas or other irrelevant texts is superfluity; whatever is spoken once again even though relevant becomes superfluous because of repetition; and this repetition is of two kinds; repetition in meaning (i.e. telling the same thing in

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different words) and repetition in words. (telling again what is uttered); for instance, to say "medicine, remedy and curing agent" or "medicine, medicine" : unmeaningness or meaninglessness is that utterance where there is only a group of words as in a grouping of the five consonants with no meaning whatsoever. Wrong or Delusive speech is wherein words appear to have sense but are mutually unrelated for instance (in a cluster of sound like) Ca-Kra-na(ta) Kra, *Vamsa, vajra, niśākara* (wheel, crocodile, rats, thunder, moon, etc.). Contradictory is what conflicts with the instances cited, decision taken and the context prevalent. Example and Decision have been explained earlier. Context is of three kinds for instance, the ayurvedic or the medical context, the sacrificial context and the philosophical context. Cs. vi.8.54.

56. अथवाक्यप्रशंसा-वाक्यप्रशंसा नाम यथा खल्वस्मिन्नर्थे त्वन्यूनम् अनधिकं, अर्थवत् अनपार्थकम् अविरुद्धम्, अधिगतपदार्थं चेति यत्तद्वाक्यमननुयोज्यमिति प्रशस्यते।।

Now Excellence of Speech - is that which in a specific meaning is neither insufficient nor superfluous, meaningful, not disinformative, noncontradictory and explicit in the sense (conveyed) - such a speech is applauded as excellent. Cs. vi.8.55.

57. अथच्छलं - छलं नाम परिशठमर्थाभासमनर्थकं वाग्वस्तुमात्रमेव। तद्द्विविधं - वाक्छलं, सामान्यच्छलं च।

Now Quibbling - This is fraudulent, delusive, unmeaningful (disinformative), and is merely a matter of speaking (with nothing else whatsoever, a pure yarn) or an unmeaningful verbosity. This is of two kinds: quibbling of words and quibbling in general (for e.g. of meaning). Cs. vi.8.56.

58. अथाहेतुः - अहेतुर्नाम प्रकरणसमः, संशयसमः, वर्ण्यसमश्चेति। तत्र प्रकरणसमो नामाहेतुर्यथा - अन्यः शरीरादात्मा नित्य इतिः परो ब्रूयात्-यस्मादन्यः शरीरादात्मा, तस्मान्नित्यः, शरीरं ह्यनित्यमतो विधर्मिणा चात्मना भवितव्यमित्येष चाहेतुः; नहि य एव पक्षः स एव हेतुरिति। संशयसमो नामाहेतुर्य एव संशयहेतुः स एव संशयच्छेद-हेतुः; यथा- अयमायुर्वेदैकदेशमाह, किंन्वयं चिकित्सकः स्यान्न वेति संशये परो ब्रूयात्-यस्मादयमायुर्वेदैकदेशमाह तस्माच्चिकित्सकोऽयमिति, न च संशयच्छेदहेतुं विशेषयति, एष चाहेतुः, न हि य एव संशयहेतुः, स एव संशयच्छेदहेतुर्भवति। वर्ण्यसमो नामाहेतुः - यो हेतुर्वर्ण्याविशिष्टः; यथा - कश्चिद् ब्रूयात्- अस्पर्शत्वाद्बुद्धिः अनित्या शब्दवदितिः अत्र वर्ण्यः शब्दा बुद्धिरपि वर्ण्या, तदुभयवर्ण्याविशिष्टत्वाद्वर्ण्यसमोऽप्यहेतुः।।

Now Fallacy (non-reason) - (This is of three kinds:) a fallacy of common causes, a fallacy of doubts, a fallacy of analogy. The fallacy of common cause is when it is said "the soul being different from the body is eternal" and the opponent would reply "because the soul is different from the body, so it is eternal". (Here) the body is not eternal (all right). But to adduce that the soul being different from the body as the reason for its eternal nature, is a fallacy. (For,) that which is the proposition (itself) cannot be adduced as a cause (for proving it). The fallacy of doubt is that which is the cause of doubt; that itself is (held here to be) the dispeller of the doubt too. For instance, (when) one says "this man shows an acquaintance with a portion of the science of life. Is he really a physician?" and the other would reply "as this man shows an acquaintance with a portion of the science of life, so he must be a physician", the latter does not explain the cause which would dispel the doubt (raised by the former). This is Fallacy. The cause of doubt

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cannot become the dispeller of doubt. The Fallacy of analogy is where the cause adduced is the quality of a thing; as for instance, when one says "the intellect is not eternal as it cannot be touched, even as a sound", here the sound is to be described and intellect is also to be described. This is the fallacy of analogy as both the factors adduced are similar in that both require to be proved. Cs. vi.8.57.

59. अथ अतीतकालम् - अतीतकालं नाम यत् पूर्वं वाच्यं तत् पश्चादुच्यते, तत् कालातीतत्वादग्राह्यं भवतीतिः पूर्वं वा निग्रहप्राप्तमनिगृह्य परिगृह्य पक्षान्तरितं पश्चात् निगृहीते, तत्तस्यातीतकालत्वान्निग्रहवचनमसमर्थं भवतीति।।

Now the Improper or Too-late-in-time is when what has to be stated before is stated afterwards. As it is stated too late, it becomes unacceptable. When the opportune moment for an argument has been allowed to pass by one and the opponent has moved on to a different topic. If then, (however) one reverts to the old topic, in order to discomfit the opponent, one's statement will not be accepted as being belated. Cs. vi.8.58.

60. अथ परिहारः - परिहारो नाम तस्यैव दोषवचनस्य परिहरणं; यथा - नित्यमात्मनि शरीरस्थे जीवलिंगान्युपलभ्यन्ते, तस्य चापगमान्नोपलभ्यन्ते, तस्मादन्यः शरीरादात्मा नित्यश्चेति।।

Now Amendment - Amendment is the correction of a faulty statement. For instance, (when one states that) "the signs of life are always found in the body in which the soul resides, when it departs, the signs disappear. Hence the soul is different from the body and is eternal." Cs. vi.8.60.

61. अथ प्रतिज्ञाहानिः - प्रतिज्ञाहानिर्नाम सा पूर्वपरिगृहीतां प्रतिज्ञां पर्यनुयुक्तो यत् परित्यजति, यथा प्राक् प्रतिज्ञां कृत्वा नित्यः पुरुषः इति, पर्यनुयुक्तस्त्वाह-अनित्य इति।।

Now Abandonment of Proposition - (That is) when a man on being refuted, gives up his (own) original position altogether. For instance, (when) he first makes a proposition that man is eternal and on being refuted admits that man is not eternal. Cs. vi.8.60.

62. अथाभ्यनुज्ञा-अभ्यनुज्ञा नाम सा य इष्टानिष्टाभ्युपगमः।।

Now Acceptance - (This) is agreeing by a person to a proposition not to his own liking but to the liking of the opponent. Cs. vi.8.61.

63. अथ हेत्वन्तरं नाम प्रकृतहेतौ वाच्ये यद्विकृतहेतुमाह।।

Now, Fallacy or reason - (This is) where one adduces not the proper but an improper reason for a thing. Cs. vi.8.62.

64. अथार्थान्तरम्- अर्थान्तरं नामैकस्मिन् वक्तव्येऽपरं यदाह। यथा-ज्वरलक्षणे वाच्ये प्रमेहलक्षणमाह।।

Now, Confusion. (This is) where a person says something when he ought to say something else; as when he ought to speak of the characteristics of fever, he speaks about the characteristics of urinary anomalies. Cs. vi.8.63.

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65. अथ निग्रहस्थानं - निग्रहस्थानं नाम पराजयप्राप्तिः तच्च त्रिरभिहितस्य वाक्यस्य अपरिज्ञानं परिषदि विज्ञानवत्यां, यद्वा अननुयोज्यस्यानुयोगोऽनुयोज्यस्य चाननुयोगः । प्रतिज्ञाहानिः,अभ्यनुज्ञा, कालातीतवचनम्, अहेतुः, न्यूनम्, अधिकं, व्यर्थम्, अनर्थकं, पुनरुक्तं, विरुद्धं, हेत्वन्तरम्, अर्थान्तरं च निग्रहस्थानम् ।।

Now, Point of Discomfiture - (This is) defeat at the hands of the opponent. It consists in the incapacity to understand a statement made thrice before a wise assembly or it is questioning of a perfect statement or letting imperfect statement go unquestioned. It is also abandonment of the original proposition or acceptance of the opponent's position or carrying out an inopportune or belated or fallacious argument, inadequate or superfluous or futile or unmeaning argument, repetition, self-contradiction, fallacy of reason or confusion. Any one of these is the point of discomfiture. Cs. vi.8.65.

66. वादस्तु खलु भिषजां प्रवर्तमानो प्रवर्तेतायुर्वेद एव, नान्यत्र। अत्र हि वाक्यप्रतिवाक्य-विस्तराः केवलाश्चोपपत्तयः सर्वाधिकरणेषु। ताः सर्वाः समवेक्ष्यावेक्ष्य सर्वं वाक्यं ब्रूयात्, नाप्रकृतकमशास्त्रमपरीक्षितमसाधकमाकुलमव्यापकं वा। सर्वं च हेतुमद्ब्रूयात्। हेतुमन्तो ह्यकलुषाः सर्व एव वादविग्रहाश्चिकित्सते कारणभूताः, प्रशस्तबुद्धिवर्धकत्वात्; सर्वारम्भसिद्धिं ह्यवहत्यनुपहता बुद्धिः ।।।

When a debate is going on among the physicians, they should discuss the Science of Medicine viz., Ayurveda and no other subject. For, in this, the conclusions are fully evolved out of statements and rejoinders in every chapter. One should speak reflecting well on all statements and should say nothing that is irrelevant, unauthoritative, uninvestigated, unhelpful, confused or too particular. Everything spoken must be supported with reason. Such statements with their supports in reason and clear in their nature, are of use in the science of treatment, for they help to clarify the intellect. The unimpeded intellect achieves the fulfilment of all its efforts (only as a result of such an argumentation) Cs. vi.8.67.

(i) *criteria for critical evaluation of technical texts - tantra yuktis-from Susruta*

67. अथातस्तन्त्रयुक्तिमध्यायं व्याख्यास्यामः ।
द्वात्रिंशत्तन्त्रयुक्तयो भवन्ति शास्त्रे ।।

"We shall now expatiate upon the devices (that are necessary to understand, criticise and evaluate a technical treatise). In the *śāstra* concerned (i.e., meant solely for carrying out such evaluative studies; *śāsati iti śāstrah - it ordains something to be so and so and none else*), thirty-two such devices are mentioned". Ss. ut.65.3.

(The word *śāstra* here evidently refers to some treatise existing then but whose name we do not know now, meant exclusively for performing such textual criticism. Here, the author provides rigorous and exhaustive criteria to judge the merits (or the otherwise) of the composition of his own work. They occur in a few other famous technical treatises of those times, for instance, Caraka Samhita, Bhattara Hari chandra and Kautilya's Arthasastra though the number (36,40 and 32 respectively) or the order varies. It is clear that such critical appraisals were thus well formulated (for instance in the works of logic or *Tarka* or correct interpretation of the Vedic Texts - *Mīmāmsa*), and actually utilised in the world of scholarship then.

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Everyone of these criteria along with the implications thereof is worthy of great and intensive study by modern students of Technical and Scientific writing in general. All this is quite relevant to writings on the philosophy of modern science, logic and pedagogy. For, very effective and terse definitions are given to many an important topic that falls within these branches of modern knowledge. For instance, we find terse answers here, for such topics as: what is a logical argument (*hetvartha*), how to define what is contra-indication (*apadeśa*) in a piece of writing, how does one proceed to state the premises and the preliminary arguments (*purva paksa*) for the main thesis and so on. These are ever fresh topics, for, they concern the very matrix of rigour in thinking. The implication of every one of the criteria is that the contents of the Text (this or any other) could be best judged under these several heads in the details as well as the quality of their execution, that the Text displays. The criteria are 32. Since it is not easy to appreciate their proper implication in the terse *sūtra* way of the Text, special efforts are made here to make them adequately elaborate and effective but keeping the way Susruta has framed them in the foreground. This is sought to be achieved by giving as and where needed (i) very detailed implications and extrapolation (see for instance criterion 5, 55, Objective, below), (ii)) reformulating the whole purport in modern parlance, where needed (for instance, to the criteria 1-4) and (iii) doing nothing where SS seems to be adequate by itself (for instance in the criterion 24, Doubt). The reader's attention is particularly drawn to this aspect of the meticulousness of the writing here. The meanings of a few criteria may sometimes seems to overlap, on a cursory view (as for instance in *nirdesa* and *nidarsana, prasanga* and *vyakhyana*). The distinction among them however is real and rigid though subtle; it always comes out on closer scrutiny.)

68. तद्यथा - अधिकरणं १, योगः २, पदार्थः ३, हेत्वर्थः ४, उद्देशः ५, निर्देशः ६, उपदेशः ७, अपदेशः ८, प्रदेशः ९, अतिदेशः १०, अपवर्जः ११, वाक्यशेषः १२, अर्थापत्तिः १३, विपर्ययः १४, प्रसंगः १५, एकान्तः १६, अनेकान्तः १७, पूर्वपक्षः १८, निर्णयः १९, अनुमतं २०, विधानम् २१, अनागतावेक्षणम् २२, अतिक्रान्तावेक्षणं २३, संशयः २४, व्याख्यानम् २५, स्वसंज्ञा २६, निर्वचनम् २७, निदर्शनं २८, नियोगः २९, विकल्पः ३०, समुच्चयः ३१, ऊह्यम् ३२, इति।।

These famous thirty-two criteria are technically designated as: 1. *adhikaraṇa* (the Subject Matter), 2. *yoga* (the Unification), 3. *padārtha* (the Implication), 4. *hetvartha* (the Logical Argument), 5. *uddeśa* (the Objective), 7. *upadeśa* (the Scope), 10 *atideśa* (the Extrapolation), 11. . *apavarga* (the Exception), 12. *vākyaśeṣa* (the Remainder), 13. *arthāpatti* (Inference), 14. *viparyaya* (the Contradiction), 15. *prasanga* (the Case Illustration), 16. *ekāntah* (the Sole Meaning), 17. *anekāntaha* (the Multimeaning), 18. *pūrvapakṣah* (the Premises), 19. *nirṇaya* (the Conclusion), 20. *anumatam* (the Consent), 21. *vidhānam* (the Methodology), 22. *anāgata avekṣaṇam* (foretelling or Pre-reference, 23. *atikrāntāvekṣaṇa* (Back Reference) 24. *samśayah* (the Doubt), 25. *vyākhyanam* (the Commentary), 26. *svasangna* (the Technical Terminology), 27. *nirvacanam* (the Interpretation), 28. *nidarśanam* (the Illustration), 29. *niyogah* (the Commandment), 30. *vikalpah* (the Alternative), 31. *samuccayah* (the Group-statement) and 32. *ūhyam* (the Guess). Ss. ut. 65.3.

69. अत्रासां तन्त्रयुक्तीनां किं प्रयोजनम् ? उच्यते- वाक्ययोजनमर्थयोजनम् च।।

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utility of these criteria : "What is the utility of these several devices for evaluating a technical treatise? I shall tell you. (They are two fold, in brief:) (they enable one to secure from the Text a proper) arrangement (*yojana*) of the syntax (*vākya* - i.e., the grammatical construction) and the semantics (*artha* , i.e. the implication and meaning)." Ss. ut. 65. 4.

(In case there are ambiguities or defects in the Text of the author, either in the grammatical constructions he employs or the meanings he endeavours to convey, utilisation of the relevant criteria (of the group of 32 mentioned above, or any other, as the reader can himself postulate) will remove them. This is *the* value of the criteria, in general. Further details, explanations and illustrations follow now).

70. असद्वादिप्रयुक्तानां वाक्यानां प्रतिपेधनम् ।
स्ववाक्यसिद्धिरपि च क्रियते तन्त्रयुक्तिः ।।
व्यक्ता नोक्तास्तु ये ह्यर्था लीना ये चाप्यनिर्मलाः ।
लेशोक्ता ये च केचित्स्युस्तेपां चापि प्रसाधनम् ।।
यथाऽम्बुजवनस्यार्कः प्रदीपो वेश्मनो यथा ।
प्रबोधस्य प्रकाशार्थं तथा तन्त्रस्य युक्तयः ।।

There are in addition the (following) *ślokas* (to again specify the value of these criteria).

You can then (i.e., if you utilise these critical adjudications) employ the texts of the treatise or the connotations of the treatise more properly and to the best possible advantage. By understanding and appreciating these devices you can refute the mistaken opinions advanced by others and also establish the truth of what you (yourself propose to) promulgate. You can clarify, refine and perfect what is implicit but not told, (bring out) the meanings that are hidden or submerged or (expatiate upon) what is not still clear or what has been told here in too brief a manner or anything of such categories if they exist in this treatise. As the sun is to a bed of lotus blooms or the light to a darkened room, so are these devices of understanding to the technical treatise; they serve for wakening up the student and to illuminate him. Ss. ut. 65. 5. 7.

(This is a beautiful proof to state that knowledge in ancient India was a living and growing body of information where every competent person was at full liberty to participate and not an once-for-all-settled affair that is to be simply followed and just imitated or complied with).

71. तत्र यमर्थमधिकृत्योच्यते तदधिकरणं; यथा- रसं दोपं वा । येन वाक्यं युज्यते स योगः । यथा -
"तैलं पिबेच्चामृतवल्लिनिम्ब
हिंस्त्राभयावृक्षकपिप्पलीभिः ।।
सिद्धं बलाभ्यां च सदेवदारु
हिताय नित्यं गलगण्डरोगे ।।"

इत्यत्र तैलं सिद्धं पिबेदिति प्रथमं वक्तव्ये तृतीयपादे सिद्धमिति प्रयुक्तं, एवं दूरस्थानामपि पदानामेकीकरणं योगः ।। योऽर्थोऽभिहितः सूत्रे पदे वा स पदार्थः, पदस्य पदयोः पदानां वाऽर्थः पदार्थः, अपरिमिताश्च पदार्थाः । यथा - स्नेहस्वेदांजनेषु निर्दिष्टेषु द्व्योस्त्रयाणां वाऽर्थानामुपपत्तिदृश्यते, तत्र योऽर्थः पूर्वापरयोगसिद्धो बुद्धिः - कतमस्य वेदस्योत्पत्तिं वक्ष्यतीति, यतः ऋग्वेदादयस्तु वेदाः; 'विद विचारणे, विद्लृ लाभे', इत्येतयोश्च धात्वोरनेकार्थयोः प्रयोगात्, तत्र पूर्वापरयोगमुपलभ्य प्रतिपत्तिर्भवति-आयुर्वेदोत्पत्तिमयं विवक्षुरितिः एप पदार्थः ।।

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यदन्यदुक्तमन्यार्थसाधकं भवति स हेत्वर्थः । यथा- मृत्पिण्डोऽद्भिः प्रक्लिद्यते तथा मापदुग्धप्रभृतिभिर्वणः प्रक्लिद्यत इति ।।

(ii) *The individual criteria* : 1 *Adhikaraṇa* or the *Subject* is that on which the (specific) teaching is done (say, in any given context) - may be, a *rasa* or a *dosa* 2. (That act of reasoning and logic) by which a unification in a sentence (or a piece of writing) is accomplished (viz., in the connotation of its own context and the full contents of the Text as a whole, even if the words concerned are far away from one another in the written piece) is the *yoga* (from *'yuj'* - united) or the *Unificationn*. For instance, take a statement (in our own Text made out earlier): "Oil is to be drunk. The two *balas* along with the *devadāru* and *amṛtavalli, nimba, himsra, abhaya, vṛkṣaka,* and *ippali* are used in preparing this. This is always good in the disease of *galaganḍa*." Here, what is stated first as "to be drunk". is united, i.e., read in connection with, (to get the full connotation of the sense) "preparing" in the later (almost the end) portion of the second sentence. To unify the words because of their connotational relatedness in this way even though they are far away in the text, is *yoga*. 3. The meaning that is heldforth (viz., the full implication thereof) in the *sūtra* or the specific formula or the word or the *pada* concerned, constitutes their (respective) *padārtha* or the *implication*. Such a meaning and connotation of one word, a couple of words or the whole set of the words concerned is the implication (of the Text in question). Such implications in a text are unlimited in number. For instance, it is possible that there can be two or even different implications in the diverse *sneha, sveda* and *anjana* (the various pharmaceutical preparations) that we have indicated and prescribed. In such a case, *that* meaning which ensues by the *yoga* or unification of what goes before and what comes after, should be accepted (i.e., apply the Criterion 2). To illustrate, in the statement that "we shall now comment upon the birth of the *Veda*" (Su.1), our intellect is likely to get confused and (the readers may start) doubting as to what *Veda* it is, whose origin is spoken about here. For, by Veda we commonly mean the *Rgveda* and the like. Besides, the verb *vid* also means to 'enquire, to acquire', apart from 'to know'. By such ways and the many possible meanings of the verbal root as such, the implications one can draw (practically to any piece of writing for that matter) are just illimitable. But, here, if you unify the before and the after of the Text, you will (usually) get the proper understanding, *pratipatti*, that the implication of the word or the *padartha*, here is the Origin of the Ayurveda (and not Rgveda etc.) 4. If what is spoken of in a specific context would also act as a measure to yield a different meaning altogether, (you would call) that, *Logical Analogy* and *Logical Argument* or *hetvartha* (or arguments by analogy). "A clod of soil gets wetted by water". On the basis of this statement, if we state that *māṣa* (i.e., black gram whose flour absorbs much water and forms a good kneadable stuff), milk and the like similarly wet the *vraṇa* (the wound), it would be a perfectly valid and logically *analogous* statement. The act of wetting in both the cases *does* have a lot of similarity. "Ss. ut. 65, 8-11.

(iii) *A Reformulation of the above four criteria* : 1. The Subject Matter or *adhikaraṇa* (*adhi*-concerning, upon: *karaṇa* - occupation, business - the chief point of consideration, *the* topic) is *the* main topic discussed in a treatise. The latter may contain numerous other topics, implicatory, additional, inessential or unconnected etc., but a well executed work has one supervening topic which is unmistakable and never lost sight of. For instance, Ss contains an abundance of varied informations

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but the surgical point of view runs through everywhere. This is *the adhikaraṇa* of Ss. 2. unification (*yuj* - unite; *yoga* - joining together) is a technical device that may become necessary to understand some portions of the Text when they are not patently clear by themselves. In such cases the reader may have to unite an item at one place with another elsewhere, grammatically or semantically. Then only the content will become clear. 3. *Padārtha* or Implication (*padasya - artha*), refers to the full implication possible to the statements made by an author interpreted mainly on the basis of the meaning of the words. Quite often, many of the words may and do mean quite many things to the readers - more, or, less or quite different, from what the author means. For, this also depends upon the *Samskāra* of the reader, i.e., his maturation and/or receptivity. In such cases of doubt the required *pratipatti*, viz., the securement of the specific meaning intended, may need special efforts, say for instance, unification as stated above (or any other device, syntactic or semantic). 4. Logical Argument (*hetvartha* or the rationale) is the specific logical argument carried out and set forth in a particular situation. Consistency in this respect is a desideratum in a work of scholarliness. It is incumbent that there should be no *hetvābhāsa* - "a mere appearance of reason, fallacious semblance of an argument or a fallacious middle term" as MW puts it. This fallacy, is said to be of five kinds: (1) deviation (*vyabhicāra*), (ii) contrariness (*viruddha*), (iii) unsettledness (*asiddha*), (iv) outright falsehood (*sat pratipakṣa* - opposite to what is true), and (v) impedence (i.e., an obstacle to the main argument, *bādha* or *ābādha*).

72. समासवचनमुद्देशः। यथा शल्यमिति। विस्तरवचनं निर्देशः। यथा- शारीरमागन्तुकं चेति। एवमित्युपदेशः। यथा- 'तथा न जागृयाद्रात्रौ दिवा स्वप्नं च वर्जयेत' इति। अनेन कारणेनेत्यपदेशः। यथाऽपदिश्यते-मधुरः श्लेष्मायाणमभिवर्धयतीति। प्रकृतस्य अति क्रान्तेन साधन प्रदेशः यथा - देवदत्तस्यानेन शल्यमुद्धृतं तथा यज्ञदत्तस्यापि अयमुद्धरिष्यतीति। प्रकृतस्य अनागतस्य साधनम् अतिदेशः। यथा यतोऽस्य वायुरुर्ध्वमुत्तिष्टते तेन उदावर्ती स्यादिति। अभिव्याप्य अपकर्षण अपवर्गः। यथा- अस्वेद्या विषोपसृष्टाः, अन्यत्र कीटविषादिति। येन पदेन अनुक्तेन वाक्यं समाप्येत सवाक्यशेषः। यथा शिरः पाणि पादपार्श्वपृष्टोदरोरसामित्युक्ते पुरुषग्रहणं विनाऽपिगम्यते पुरुषस्येति। यदकीर्तितं अर्थादापद्यते साऽर्थापत्तिः। यथा ओदनं मोक्ष्ये इत्युक्तेऽर्थादापन्नं भवति नायं पिपासुर्यवागूमिति। यद्यत्राभिहितं तस्य प्रातिलोभ्यं विपर्ययः। यथा- कृशाल्पप्राणभीरवो दुश्चिकित्स्या इत्युक्ते विपरीतं गृह्यते दृढादयः सुचिकित्स्या इति। प्रकरणान्तरेण समापनं प्रसंगः यद्वा प्रकरणान्तरितो योऽर्थोसकृदुक्तः समाप्यते स प्रसंगः। यथा - पंचमहाभूत शरीरि समवायः पुरुपस्तस्मिन् क्रिया सोऽधिष्टानमिति वेदोत्पत्तावभिधाय भूतचिन्तायां पुनुभिरुक्तं-यतोऽभिहितं पंचमहाभूत शरीरि समवायः पुरुष इति, स खल्वेव कर्मपुरुषश्चिकित्साधिकृत इति (सर्वत्र) यदवधारणेनोच्यते स एकान्तः। यथा- त्रिवृद्विरेचयति, मदनफलं वामयति एव। क्वचित्तथा क्वचिदन्य येति यः सोऽनेकान्तः। यथा केचिदाचार्या ब्रुवते द्रव्यं प्रधानं, केचिद्रूसं, केचिद्वीर्यं केचिद्विपाकमिति। आक्षेपपूर्वकः प्रश्नः पूर्वपक्षः। यथा- कथं वातनिमित्त श्चत्वारः प्रमेहा असाध्या भवन्तीति। तस्योत्तरं निर्णयः। यथा- शरीरं प्रपीड्य प्रश्चादधोगत्वा वसामेदोमन्नानुविद्ध मूत्र विसृजति वातः, एवमसाध्या वातजा इति। तथा चोक्तम्-कृत्स्नं शरीरं निष्पीड्य मेदोमज्जावसायुतः। अधः प्रकुप्यते वायुस्तेनासाध्यास्तु वातजाः। परमतमप्रतिषिद्धमनुमतम्। यथा- अन्यो ब्रूयात् सप्तरसा इति, तद्याप्रतिषेधादनुमन्यते कथंचिदिति। प्रकरणानुपूर्व्याभिहितं विधानम्। यथा - सक्थिमर्माण्येकादश प्रकरणानुपूव्याऽभिहितानि। एवं वक्ष्यतीति अनागतेक्षणम्। यथा श्लोकस्थाने ब्रूयात्-चिकित्सितेषु वक्ष्यामीति। यत्पूर्वमुक्तं तदति क्रान्तावेक्षणम्। यथा- चिकित्सितेषु ब्रूयात् श्लोकस्थाने यदी रितमिति। उभय हेतु दर्शनं संशयः। यथा - तलहृदयभिघातः प्राणहरः, पाणिपादच्छेदनमप्राणहरमिति। तंत्रेऽतिशयोपवर्णनं व्याख्यानम्। यथा - इह पंचविंशतिकः पुरुषो व्याख्यायते, अन्येष्वायुर्वेदतन्त्रेषु भूतादिप्रभृत्यारभ्य चिन्ता। अन्य शास्त्रासामान्या स्वसंज्ञा। यथा-मिथुनमिति मधुसर्पिषोर्ग्रहणं। लोक प्रसिद्धमुदाहरणं वा। निश्चितं वचनं निर्वचनम्। यथा- आयुर्विद्यतेऽस्मिन्ननेन वा आयुर्विन्दतीति आयुर्वेदः।

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दृष्टान्त व्यक्तिर्निदर्शनम्। यथा - अग्निर्वायुना सहितः कक्षे वृद्धिं गच्छति तथा वातपित्तकफ दुष्टो व्रण इति। इदमेवं कर्तव्यमिति नियोगः। यथा- पथ्यमेव भोक्तव्यमिति। इदं चेदं चेति समुच्चयः यथा मांसवर्गं एण हरिपादयो लाव तित्तिरिशारंगाश्च प्रधानानीति। इदं वेदं वेति विकल्पः। यथा- रसौदनः सघृता यवागूर्वा (भवत्विति)। यदनिर्दिष्टं बुद्ध्यावगम्यते तदूह्यम्। यथा - अभिहितमन्नपानविधौ चतुर्विधं चान्नमुपदिश्यते-भक्ष्यं भोज्यं लेह्यं पेयमिति, एवं चतुर्विधे वक्तव्ये द्विविधमभिहितम् इदमत्रोह्यम् अन्नपाने विशिष्टयोः द्व्योर्ग्रहणे कृते चतुर्णामपि ग्रहणं भवतीति, चतुर्विधश्च आहारः, प्रविरक्तः, प्रायेण द्विविध एवः अतो द्वित्वं प्रसिद्धमिति। किंचान्यत्-अन्नेन भक्ष्यमविरुद्धं, घनसाधर्म्यात्; पेयेन लेह्यं, द्रवसाधर्म्यात्।

iv) *The rest of the criteria*

"5. Objective (or the *uddesa* is the purpose of all that is said, in totality). it is essentially a *samasa* (sam, asa-taking everything together) *vacana* or a synoptic statement. (To illustrate, if we say in a given context that this is) 'salyam', (it would mean that the final purport of all that we have stated would be served if you note that such and such a procedure here is a surgical - and not a medical, measure. It is necessary that in any well written work, the author should give no scope for the reader to lose sight of the objective). 6. (If one were to expatiate - on any specific thing, in an abundance of words) (by making) a *vistara vacana* or an elaboration of words, (that) would be (tantamount to giving) all the *Direction* or *nirdesa*. (*This becomes necessary in cases where the objective is not clear because of the sheer verbiage of the author*). For instance, when we say that a (given) disease is born in the body (but not mind) and (also say, that this) is due to an accidental cause, (the second portion of the sentence is strictly unnecessary because the former statement itself is complete. Adding that this disease is due to an accidental cause however helps us specify further, viz., to give a direction as to what kind of the bodily and not the mental disease is meant here; this second portion thus specifies or directs that it is brought about by an accident and say, not by a *dosic* abnormality). 7. *Precept* or *upadesa* is the detailed teaching like '*evam - iti*': 'thus, this way' (or the commandment); e.g., (The statement that) you should not keep awake in the night and you should also give up sleep during the day. (*in a Medical Text meant for practitioners, there is much scope for giving specific and unambiguous instructions of this nature. Does SS contain them? It does, in ample measure*). 8. Contra-indication (is stating that it is) because of such and such a reason, this (particular) possibility is contra-indicated. (*This apadeśa is virtually a statement of reason. This is in fact an act of argument, or it is the second step in a syllogism that because of such and such a reason, this particular point gets taken off, apa disyate*). Example: '*Madhura*, (i.e., because the substance that we have taken up to start with itself is *madhura*, it automatically) promotes (the formation of) *śleṣma* (the necessary consequence of any *madhura* substance in the body and any action other than that of *madhura* is therefore contra-indicated).

9. If one establishes a thing by going further than what is given in a context, that would be (exploring) the full *Scope* or defining the *pradeśa* (or the complete range of it). To illustrate, "By this way, the *śalya* has been removed from the body of Devadatta" is the statement given. (When this is so, if we now state that) "we can certainly remove the *śalya* from the body of Yagnadatta (also in this way)", we would be illustrating as well as exploring the full scope of the text and the treatise.

10. To accomplish (i.e., bring about) the *future* of what is given and the immediate, is *atideśa* or, going beyond, or, carrying out an Extended Application or reaching the

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limits (*Exptrapolation*). An example: "because in this patient the *vāyu* is raising upwards, (therefore) it means (i.e., we deduce the limits of this statement) that he is suffering from *udāvarta* (a class of diseases, marked by retention of the faeces as the *apāna vāyu* which going abnormally upwards is obstructing it). *(Extrapolation - ati, desa - make over, go beyond, is the calculation of more or less probable values for a function outside the limits between which values are known).*

11. To spread everywhere (in argument) and then abstract (some thing out of it) is (to provide) exception. To make an universal statement first and then select some portions out of it, would be to state the Exception, or carrying out an act of *apavarga* . An example: "Poisoned patients should never be treated by sudation. But those that are poisoned by means of insect bites, - they *can* be sudated; they are an exception."

12. By which the sense of a statement is completed (by us, viz., the readers even though, it is not done so in the Text), this (i.e., the words we use to do so) would be the *Remainder* (or, the dispensable portion of the) text or the *vākya śeṣa* e.g., "If you say the head, the hands, the feet, the sides, the back, the belly and the chest - this itself means (that you are actually speaking of) the whole of the human person or the *puruṣa* . It is not necessary to say again, *'puruṣa'* or 'the human being': we the readers can ourselves fill this up as the remainder of this Text.

13. What is secured (by us), untold (by the author) is inference, *arthāpatti* (securing meaning). If what is not told (explicity), becomes clear by context, that (i.e., the specification of such a context would be *arthāpatti* or *inferential knowledge*). An example: "If you say feed him with cooked rice", it is clear from this statement that he (i.e., the patient) should not be given *yavāgu* (a liquid diet of gruel), but only the cooked rice. (The latter clarification that liquid diet is not to be given is secured by us through the very context that the Text provides and our inference).

14. What is exactly the opposite of what is held forth in a context is the *Alternative* or the *viparyaya* . An example: If one states that a weaking or a timid person is difficult to be treated, we can easily take that the strong and the brave person is treated with ease (therefore)."

15. To complete (the account of a thing) by (quoting) a different topic altogether is (to give a) *prasanga* or, a *Case Illustration* . Whatever is explained (thus) by (quoting) several other case illustrations and that meaning which is completed by repeating these (cases) again and again (in other words, by providing) several such illustrations, is called quoting a *prasanga* or the Case Proper. For instance, having said in our chapter entitled *Vedotpatti* earlier, "that the coherence of the five *mahabhūtas* and the *śarīri* is *puruṣa* , in this is carried out all the activities of a physician, he is the receptacle of it all (and so on)" (Su.1), if we once again state in the Chapter *bhūtacikitsa* later on, that "we have already mentioned that *puruṣa* is the coinherence of the five *mahabhūtas* and the *śarīri*, (and) it is this person who carried out several acts (that have brought about his mental ill-health) (and) it is (this again that happens to be the object of our treatment)", when we go on saying in this manner - you should note that all this is an illustration of explaining by quoting the several relevant incidents or *prasanga* . (In other words, we provide here a large number of requisite) cases and (carry out) a profuse illustration of our original proposition (and not offer, a meaningless repetition).

16. "What is spoken of as of *Universal Validity* and understanding, that would be the Sole (or *the* unequivocal) meaning *ekantah* . E.g., " *Trivṛt* is purgative, *Madana* is emetic" (viz., there is no exception; these statements are univarsally valid).

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17. "Sometime this, sometime some other way", if (you should say) in such a manner, (you mean that) it (i.e., your statement exhibits) is showing (a) *Multimeningedness* or *anekantah* . To illustrate, some experts say that the predominant factor in therapy is *dravya* (the crude drug), others say it is the *rasa* (its assimilable essence), yet others say it is *virya* (its potency) or the *vipāka* (post-assimilative effect) (and so on).

18. A question that is put forth with all the objections for its validity (also stated out), would be called (a setting forth of) the Proposition (or, the making of a *Premises*) or laying down the *pūrva pakṣa*. An e.g., "How is it that the *premeha* of the four kinds become impossible of being treated when it is caused by the single *doṣa* of the *vāta*? (*This statement is a valid proposition* or premises stated a *priori* with all its relevant data).

19. The answer for (such a) proposition (would constitute a) *Conclusion* or *nirṇaya* . (For example, take the statement:) "Having troubled the body very much and going down afterwards, and getting mixed there with *vāta, meda* and *majja* (and therefore aggravating them as well), this *vāta* secretes the urine (along with these vitiated *vāta, meda,* and *majja*). It is because of this (mixing up), *vātaja prameha* or urinary affliction due to *vāta* is considered impossible. (Here, the second sentence is the conclusion or *nirṇaya* for the Proposition or the *pūrva pakṣa* constituted by the first sentence. To continue the argument). It has been said: "Oppressing well the whole of the body and accompained with adipose tissue (*meda*), marrow (*majja*) and lard (*vasā*), *vāyu* becomes inflammated down below. That is why the *vāta* born urinary affliction (*prameha*) becomes incurable."

20. Not to oppose other's opinion is to agree with it, or, give our *Consent, anumatam* . For instnace, say, if somebody else states that there are seven kinds of assimilative essences or *rasa* (and not six as it is usually told), if suppose we agree with it without asking how it is possible, that would be: giving out consent.

21. What we hold forth by a retinue of several topics is (setting forth) the *Methodology* or the *vidhāna* (of starting about the topic we wish to discuss). An Example: The *marmas* of the thigh are eleven. We have enumerated everyone of this series subsequently. (The statement of the first sentence is possible and actually set forth, for, to state so, we have adopted the methodology of counting out every individual case that comes under this head of the *marmas* of the thigh).

22. To say that I shall tell about it later, is (actually) to mention it beforehand. (This is done so, i.e., such a step is taken recourse to, because of a specific relevance of the content in doing so. Virtually, therefore) this is a statement (made out) beforehand, or *Foretelling* or *anāgata avekṣaṇa* Example: (the statement in the Text, like) "I shall tell about it (later) in the context of medicine", etc.

23. What is told earlier (than the present occasion) is *atikrānta avekṣaṇam* - or Back Reference. Example: (the statements in Text:) "to be spoken in (the topic of) Medicine: as that has been said (earlier) in *ślokasthāna* " (*It is interesting to note that there is no Ślokasthāna in Ss. To what is Susruta referring here* ?)

24. To adduce both the possible reasons as the cause (for an entity) is (to provide a) Doubt or *samśaya* e.g., (the statements in the Text) "Injury at the *marma* called *talahṛdaya* is fatal. Injury on the surfaces of the hand and the foot is non-fatal." (*Talahṛdaya* is itself a *marma* situated in the flat surface of the hand and the foot. The latter statement therefore causes a doubt in us).

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25. To describe in a technical treatise anything that is beyond its own (legitimate) scope (in its strict sense), is (to carry out an act of) *Discourse* or *vyākhyānam*. Example: (the statement in the Text) "In our treatise we consider and comment on a premises that the *puruṣa* is of thrity-five factors. In other treatises on Ayurveda however, consideration of the composition of the *puruṣa* proceeds from that of the *bhūtas* and the like (and the number therefore, differs.' *The second statement is thus an example of a discourse*).

26. What is *not* the common connotation in the other treatises is called *swasamgna* (i.e., to clothe any ordinary word even, with a meaning that is purely esoteric in a Treatise is to make a technical term out of it or achieve) the Technical Terminology. To illustrate, the term '*mithuna*' or the couplet has its famous meaning as 'husband and wife' (in common literature, for instance). But in the context here, what is meant (by us) is honey and ghee (i.e., we are using this otherwise famous term to a very special sense or, *technically*). (*This is a very neat definition of what is a tecnical term. It is a word in the ordinary language that has been clothed with a special meaning for a purely esoteric purpose*).

27. *A Conclusive Statement* is a *nirvacana*. Example (the statement in the Text) "by means of this, life is obtained - hence this is called Ayurveda". This is a conclusion of Āyurveda - there is no uncertainty about it whatsoever.

28. *Illustration* or *nidarśana* is to give an example of an individual case. For example (see the statements in the Text) "in a clump of hay, if the fire gets the aid of wind, the flames will get augmented. Similarly an ulcer will get more aggravated when there is a tainting (*duṣta*) with it, of *vāta, pitta* and *kapha*"

29. "This alone (viz., one particular course of action alone and none else) is to be done." Such statements in the Text is *niyoga* or represent a *commandment*. Example: "Eat only what is *pathya* (wholesome)."

30. "This is and that one also" - to say thus is *samuccaya* or (to provide) a *Group Statement*. (For example, see our statement) "In the group of the meat foods, the meats of the (beasts like) *eṇa* and *hariṇa* and the (birds like) *lāva, tittiri* and *śaranga* are the pre-eminent ones.'

31. To say that it may be so or it may be the other way also, is (to provide) *Alternatives* or *vikalpa*. For example, see our statement "Take *rasaudana* (cooked rice with light soup) with ghee. Or, *yavāgu* is also alright."

32. What is not stated but secured (by our i.e., the reader's intellect) is *Guess* or *ūhyam*. (For example) (i) in the method of *annapāna*, four kinds of *anna* are taught, i.e., what is eaten, gulped, licked or drunk. Eventhough four are directly stated, the two kindedness is also mentioned (here). What to guess (under such a circumstance) is as follows: in the great diversities of the *annapāna*, even if you divide them just into two categories, all the four can be comprehended. To have all the four kinds of *āhāra* is rare; it is probably of two kinds alone (for all practical purposes). That is why, (we so conclude that) it has been said here that it is of two kinds, alone. (ii) By '*anna*' we (also comprehend *bhakṣya*, because both are solid (and, similarly) by drinks we include electuals as well, because both are liquid." Ss. su. 65 12-40.

73. सामान्यदर्शनिनासां व्यवस्था संप्रदर्शिता।
विशेषस्तु यथायोगमुपधार्यो विपश्चिता।।
द्वात्रिंशद्युक्तयो ह्येतास्तन्त्रसारगवेषणे।

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मया सम्यग्विनिहिताः शब्दार्थन्यायसंयुताः ।।
यो ह्येता विधिवद्वेत्ति दीपीभूतास्तु बुद्धिमान् ।
स पूजार्हो भिषक् श्रेष्ठ इति धन्वन्तरेर्मतम् ।।

(v) *A final statement* : "Such an arrangement of the devices for evaluating a technical treatise has been exhibited by me. If further specilisations are needed, the intelligent expert is to presuppose them as the occasion demands. I have thus stated the thrity-two devices to investigate the essence of (my) Technical Treatise. (I have done so,) completely, giving the meanings of the words employed as well as the logical arguments behind them. He who understands them (all) according to the rules and the stipulations (*vidhivat*) - such an intelligent person who has become illuminated or enlightened (*dīpī bhūta* - the person himself has become a light) becomes worthy of respect. This is the opinion of Dhanwantari (*and therefore incontrovertible*)." Ss. su. 65.41-33.

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5. Medical Services - Organisation

1. इह खलु राजानं राजमात्रमन्यं वा विपुलद्रव्यं (संभृतसंभारं) वमनं विरेचनं वा पाययितुकामेन भिषजा प्रागेवौषधपानात् संभारा उपकल्पनीया भवन्ति, सम्यक्चैव हि गच्छत्यौषधे प्रतिभोगार्थाः, व्यापन्ने चौषधे व्यापदः परिसंख्याय प्रतीकारार्थाः; न हि संनिकृष्टे काले प्रादुर्भूतायामापदि सत्यपि क्रयाक्रये सुकरमाशु संभरणमौषधानां यथावदिति।।

a. *the need*

The physician who wishes to administer the procedure of emesis or purgation to a king or any other (person) similar to a king must keep ready his full armamentarium before beginning his treatment itself. If the procedure proves quite successful, this (step) would serve for after treatment; if it goes wrong, this would serve to diagonse the complications and (also) counter-measure them. The equipment should be kept ready beforehand itself like this, the (entire) stock of the remedies exactly as needed in the event of an emergency development of the disease because it is not easy to obtain (them) immediately, even if the means to buy (later, if the occasion arises) is available. Cs. su. 15.3.

2. एवंवादिनं भगवन्तमात्रेयमग्निवेश उवाच-ननु, भगवन्! आदावेव ज्ञानवता तथा प्रतिविधातव्यं यथा प्रतिविहिते सिध्येदेवौषधमेकान्तेन, सम्यक् प्रयोगनिमित्ता हि सर्वकर्मणां सिद्धिरिष्टा, व्यापच्चासम्यक्प्रयोगनिमित्ताः अथ सम्यगसम्यक् च समारब्धं कर्म सिध्यति व्यापद्यते वाऽनियमेन, तुल्यं भवति ज्ञानमज्ञानेनेति।।

b. *a doubt; (and) hospitals (?) - a general hospital?*

Agnivesa said to the worshipful Ātreya who had thus spoken "It (i.e. this advance procurement) need not be so, O Worshipful Sir. A knowledgeable physician should administer the medicine in such a way at the beginning itself, that it will succeed invariably, and unfailingly. The proper application of remedies is always attended with the desired results and the ill effects are always due to improper application. And in case, if treatment, whether well-administered and ill-adminstered, both succeed or become complicated indeterminatively, then one should (have to perforce) regard knowledge as well as ignorance as being the same. Cs. su.15.4.

3. तमुवाच भगवानात्रेयः - शक्यं तथा प्रतिविधातुमस्माभिरस्मद्विधैर्वाऽप्यग्निवेश! यथा प्रतिविहिते सिध्येदेवौषधमेकान्तेन, तच्च प्रयोगसौष्ठवमुपदेष्टुं यथावत्; न हि कश्चिदस्ति य एतदेवमुपदिष्टमुपधारयितुमुत्सहेत, उपधार्य वा तथा प्रतिपत्तुं वा; सूक्ष्माणि हि दोषभेषजदेशकालबलशरीराहारसात्म्य-सत्वप्रकृतिवयसामवस्थान्तराणि, यान्यनुचिन्त्यमानानि विमलविपुलबुद्धेः अपि बुद्धिमाकुलीकुर्युः किं पुनरल्पबुद्धेः, तस्मादुभयमेतद्यथावदुपदेक्ष्यामः - सम्यक् प्रयोगं चौषधानां व्यापन्नानां, च व्यापत्साधनानि सिद्धिपूत्तरकालम्।।

The revered Atreya replied to him "It is possible Agnivesa for me or some body like me to counter-measure (a disease) in such a way that the remedy so administered will definitely succeed unfailingly, and also to teach the extreme skilfulness of such an application, exactly. But there is none who is able to

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comprehend such an instruction or having comprehended it, proceed accordingly and apply it. Subtle indeed are the (possible) diversities in the states of vitiation, remedy, region, time, strength, body, food compatibility, mind, constitution and age. The intellect of even a very clear minded person will be baffled when he tries to closely follow them (all); what (then) to talk of a man of little intellect? It is therefore that we teach here both: a proper application of the remedies and the means of (preparing oneself for an) emergency treatment (by prior equipment, as stated above); the case of complications arising (during the progress of a disease) we shall teach later on in the Section on "Success in treatment". Cs.su. 15.5.

4. इदानीं तावत्संभारान्विविधानपि समासेनोपदेक्ष्यामः; तद्यथा-दृढं निवातं प्रवातैकदेशं सुखप्रविचारमनुपत्यकं धूमातपजलरजसामनभिगमनीयमनिष्टानां च शब्दस्पर्शरसरुपगन्धानां सोदपानोदूखलमुसलवर्चः स्थानस्नान भूमिमहानसं वास्तुविद्याकुशलः प्रशस्तं गृहमेव तावत् पूर्वमुपकल्पयेत्।।

Now therefore we shall teach in brief even the various equipment and provisions. It is thus: The expert in architecture should design beforehand itself a well acclaimed house (a hospital ?,) which is strong and is warding off the wind except on one side: affording easy moving place; not situated in a low land; unapproachable to smoke, direct sun, water and dust as well as undseirable noise, touch and contact, taste, sights and odours; and is furnished with well (a water storage room?), mortar, pestle (a pharmacy room ?), place for lavatory, bathing space and kitchen. Cs.su, 15.6.

5. ततः शीलशौचाचारानुरागदाक्ष्यप्रादक्षिण्योपपन्नानुपचारकुशलान् सर्वकर्मसु पर्यवदातान् सूपौदनपाचकस्नापकसंवाहकोत्थापकसंवेशकौषधपेषकांश्च परिचारकान् सर्व-कर्मस्वप्रतिकूलान्, तथा गीतवादित्रोल्लापकश्लोकगाथाख्यायिकेतिहासपुराणकुशलानभिप्रायज्ञाननुमतांश्च देशकालविदः पारिषद्यांश्च, तथा लावकपिंजलशशहरिणैणकालपुच्छकमृगमातृकोरभ्रान्, गां दोग्ध्रीं शीलवतीमनातुरां जीवद्वत्सां सुप्रतिविहित-तृणशरणपानीयां, पात्र्याचमनीयोदकोष्ठमणिकघटपिठरपर्योगकुम्भीकुम्भकुण्ड- शरावदर्वीकटोदंचनपरिपचनमन्थानच-मचेलसूत्रकार्पासोर्णादीनि च, शयनासनादीनि चोपन्यस्तभूंड्.गारप्रतिग्रहाणि सुप्रयुक्तास्तरणोत्तरप्रच्छदोपधानानि सोपाश्रयाणि संवेशनोपवेशनस्नेहस्वेदाभ्यंगप्रदेहपरिषेकानुलेपनवमन - विरेचनास्थापनानुवासनशि-रोविरेचनमूत्रोच्चारकर्मणामुपचारसुखानि, सुप्रक्षालितोपधानाश्च सुश्लक्ष्णखरमध्यमा दृषदः, शस्त्राणि चोपकरणार्थानि, धूमनेत्रं च, बस्तिनेत्रं चोत्तरबस्तिकं च, कुशहस्तकं च, तुलां च मानभाण्डं च, धृततैलवसामज्ज क्षौद्रफाणितलवणेन्धनोदकम - घुसीघुसुरासौवीरकतुषोदकमैरेयमेदकदधिमण्डोदश्रिवद्धान्याम्लमूत्राणि च, तथा शालिषष्टिकमुद्गमाषयवतिलकुलत्थबदरमृद्वीकाकाश्मर्यपरूषका - भयामलकविभीतकानि नानाविधानि च स्नेहस्वेदोपकरणानि द्रव्याणि, तथैवोर्ध्वहरानुलोमिकोभय भांजिसंग्रह-णीयदीपनीयपाचनीयोपशमनीयवातहरा-दिसमाख्यातानि चौषधानिः यच्चान्यदपि किंचिद्व्यापदः परिसंख्याय प्रतीकारार्थमुपकरणं विद्यात्, यच्च प्रतिभोगार्थं, तत्तदुपकल्पयेत्।।

Then, (the following should be arranged in that house): (1) the attendant staff who have character, cleanliness, good conduct, affection, dexterity and capability as well as sympathy; who are skilled in nursing, circumspect in all arts, who are skilled in cooking soups and rice, in giving baths and massage, in lifting or laying (the patient in bed) and in administering the medicines; (2) similarly (the following should be arranged): the councilling staff who are experts in singing, playing on musical instruments, panegyrics, verses, stories, legends, modern history, ancient mythology; who are also capable of understanding the intentions (of the patient) and are agreeable, pleasant and beloved, and who are also well aware of the region

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and the times (in which they should apply these facilities); (3) similarly (the following): quail, grey patridge, hare, deer, black buck, black tailed deer, hog deer and wild sheep (all, as food materials?) as well as milking cow having the calf living, good tempered and healthy (for securing milk, constantly); and, a good arrangment for grass, byre and water (for keeping these animals nourished); (4) vessel, sipping spoon, water-tub, pot, (cooling) pot, pan, jug, pitcher, bowl, saucer, (wooden) ladle, mat, cover-plate, frying pan, churning staff; skin, cloth, yarn, cotton, wool, etc; (5) beds, seats and the like with kettles and spitoons kept nearby; well spread bed sheets, coverlets and pillows with pillow cases; conveniences for giving the services of inclining, reclining, oleation, sudation, inunction, smearing (of ointments), affusion, anointment, emesis, purgation, simple enema, corrective enema, errhines, micturition and defecation; (6) well washed roller-stone,well polished, hard and medium sized grinding slabs, surgical instruments and their other accessories, smoking pipes, enema tubes, tubes for urethral and vaginal douce, broom sticks, balances and measuring vessels; (7) ghee, oil, animal fat, marrow, honey, treacle, salt-water; honey wine, *sīdhu* wine, *surā* wine *sauviraka* wine, *tuṣodaka, maireya* and *medaka* wine; (these are different types of wines of intoxicating drugs prepared by fermenting various materials; were they kept for 'anesthetising' as it were, of the patients as Susruts states and/or as means of bringining cheer and restoration, whenever needed? *sidhu*, molasses (a rum ? - sugar -cane juice ?), *sura*, a kind of beer (from malted barley flavoured with hops (Chambers dictionary), *tusodaka* sour-rice or barley gruel; *maireya*, a combination of *sura* and *asava*, a decoction; *medaka*, a plant, *alambusa* or a fat? (with assistance from MW); curds, whey, semidiluted curds, sour gruel and urines (for urine therapy); 8) similarly, *śāli* rice, *ṣaṣṭika* rice, green gram, black gram, barley, sesame, horse gram; (fruits of) jujube, grapes, *kāśmarya*, sweet falash, myrobalan, emblic and beleric myrobalan (- *all, are storeable provisions, refreshing and medicative fruits*); (9) and necessary materials of various kinds as required for oleation and sudation and similarly for emesis, purgation and for combined action; astringents and digestive stimulants, digestives, paliatives, drugs that are curatives of *vāta* and the others as narrated (elsewhere).

Whatever else apart from these, whatever accessories that are known to be needed for emergency, diagnosis and counter measuring, whatever that is there fore after treatment - all of these should be arranged for and kept ready (in this house) Cs.. su. 15.7.

6. अनेन विधिना राजा राजमात्रोऽथवा पुनः । यस्य वा विपुलं द्रव्यं स संशोधनमर्हति ।।
दरिद्रस्त्वापदं प्राप्य प्राप्तकालं विशोधनम् । पिबेत् काममसंभृत्य संभारानपि दुर्लभान् ।।
न हि सर्वमनुष्याणां सन्ति सर्वे परिच्छदाः । न च रोगानबाधन्ते दरिद्रानपि दारुणाः ।।
यद्यच्छक्यं मनुष्येण कर्तुमौषधमापदि । तत्तत् सेव्यं यथाशक्ति वसनान्यशनानि च ।।

Only a king or those who are king like or who have ample wealth can be given the purificatory procedure (as narrated above). A poor man however, when afflicted with a disease and is in need of a purificatory measure, should take whatever drugs that are within his reach leaving out those that are beyond him. All facilities are not available to all men and it is not that severe diseases do not torment the poor. Whatever drug that is possible for one to take at the moment of distress, one should take up that alone, the clothes as well as the foods. Cs. su. 15. 18-21.

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7. तत्र प्राणैषणां पूर्वं समापद्येत मानवः । धर्मार्थकामप्राप्तिर्हि सद्भिः प्राणैः प्रपद्यते ।।
धर्मादीनामवाप्तिश्च पुरुषार्थः परः स्मृतः । तस्माच्छरीरं सततं परिरक्षेद्भि शास्त्रतः ।।

Among the three pursuits of life, man should first secure the pursuit of life. Attainment of *dharma*, material prosperity and personal desires as well as lust - all of these are indeed obtainable only by life (i.e. only if a person first possess life). Securing the end of these pursuits commencing from *dharma* onwards is considered to be the greatest achievement by the personal efforts of man. Therefore the (living) body (of a person) should be protected constantly and in accordance with the technical treatises concerned. Bhe su. 15.

8. 'उपकरणमारोग्यभोगधर्मसाधनीभूतो धनप्रपंच' इति चक्रः ।

The world of wealth is an embodiment of paraphernalia, health, enjoyment and means of securing *dharma*. Cakra. Cs. su. 11.5.

(c) *a labour hospital*?

9. नवमे मासि सूतिकागारमेनां प्रवेशयेत् प्रशस्ते तिथ्यादौ । तत्रारिष्टं ब्राह्मणक्षत्रियवैश्यशूद्राणां श्वेतरक्तपीतकृष्णेषु भूमिप्रदेशेषु बिल्वन्यग्रोधतिन्दुकभल्लातकनिर्मितसर्वागारं यथासंख्यं तन्मयपर्यंकं समुपलिप्तभित्तिं सुविभक्तपरिच्छदं प्राग्द्वारं दक्षिणद्वारं वा ऽष्टहस्तायतं चतुर्हस्तविस्तृतं रक्षामंगलसंपन्नं विधेयम् ।।

This enciente (patient) should be made to enter the labour building in her ninth month and on an excellent and auspicious day, time and the like. There one should organise safe and secure apartments that would prove safe against injury or damage (MW) in land sites that are (viz. where the soil is) white, red, yellow and black respectively for the (four castes of) *brahmins*, the *ksatriyas*, the *vaisyas* and the *sudras*, the building as a whole made up of the wood (i.e. the timber used) of *bilva, nyagrodha, tinduka* and *bhallataka* (in this order, respectively) and divided into several numbers (of apartments) as needed, each apartment provided within itself with a bed, with walls very well plastered, very clearly demarcated enclosure, the door facing east or south, eight hands in length and four hands in breadth and endowed with protective talismans and auspicious equipments. Ss. sa. 10.5.

10. प्रजनयिष्यमाणां कृतमंगलस्वस्तिवाचनां कुमारपरिवृतां पुन्नामफलहस्तां स्वभ्यक्तामुष्णोदकपरिषिक्तामथैनां सम्भृतां यवागूमाकण्ठात् पाययेत्, ततः कृतोपधाने मृदुनि विस्तीर्णे शयने स्थितामाभुग्नसक्थीमुत्तानामशंकनीयाश्चतस्त्रः स्त्रियः परिणतवयसः प्रजननकुशलाः कर्तितनखाः परिचरेयुरिति ।।

As the lady is about to deliver, she should be assuaged with auspicious words ..... and made to drink *yavagu* (rice gruel-slightly intoxicating?) till her brim. Then onwards, when the pillows are kept ready and a soft and wide bed is prepared, four unsuspectable ladies, advanced in age and skilful in labour should attended on her with their nails well pared and as the lady lies facing upwards and knees bent in. Ss. Sa. 10.8.

11. प्राक् चैवास्य नवमान्मासात् सूतिकागारं कारयेदपहृतास्थिशर्कराकपाले देशे प्रशस्तरूपरसगन्धायां भूमौ प्राग्द्वारमुदग्द्वारं वा बैल्वानां काष्ठानां तैन्दुकैंगुदकानां भाल्लातकानां वार (रु) णानां खादिराणां वा; यानि चान्यान्यपि ब्राह्मणाः शंसेयुरथर्ववेदविदस्तेषां; वसनालेपनाच्छादनापिधानसंपदुपेतं वास्तुविद्या-हृदययोगाग्निसलिलोदूखलवर्चः स्थानस्नानभूमिमहानसमृतुसुखं च ।।

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Even before her ninth month, one should get a labour building constructed on a site from which bones, gravels and broken pieces of mud-pot have been removed, in a soil which has excellent form, nutrient fluids and fragrance, with the door facing east or north; out of timbers of *bilva, tinduka, inguda, bhallataka, varuna* or even of any other (tree) as the brahmins well versed in atharva veda recommend; equipped with (changes of) dress, ointments and other external applications; clothes to cover up and pillows and constructing (therein) as directed by experts in architectural learning, (separate) placements for fire, water, wooden mortar (for pounding rice and separating the husk); place for defecation, for bathing and kitchen - all in conformity with the seasonal comforts. Cs. sa. 8.33.

(d). *a paediatric hospital* ?

12. अतोऽनन्तरं कुमारागारविधिमनुव्याख्यास्यामः वास्तुविद्याकुशलः प्रशस्तं रम्यमतमस्कं निवातं प्रवातैकदेशं दृढमपगतश्वापदपशुदंष्ट्रिमूषिकपतंग सुविभक्तसल्लिलोलूखलमूत्रवर्चः स्थानस्नानभूमिमहानसमृतुसुखं यथर्तुशयनासनास्तरणसंपन्नं कुर्यात्; तथा सुविहितरक्षाविधानबलिमंगलहोमप्रायश्चितं शुचिवृद्धवैद्यानुरक्तजनसंपूर्णम्। इति कुमारागारविधिः।।

We shall now comment in detail about the prescriptions for the building meant for the children (- pediatric ward?). The architectural expert should render (it) excellent, charming, non-dark (i.e. well-lit), not exposed to direct wind, the breeze being allowed to come in only one direction, strong and durable; free from access to dogs, or any other predatory animals, rats and butterflies and moths; provided with clearly separated places for water (storage), pounding mortar, urination, defecation, bathing and kitchen - all in conformity with the seasonal comforts and equipped with means of sitting, sleeping and spreading in accordance with (the various) seasons; and, also with good facilities for measures of protective talismans, sacrifics, auspicious rites and doing penitentiaries and completely filled with clean, elderly people, physicians and affectionate persons (attendants). This is the methodology for creating a pedicatric ward. Cs. sa. 8.59.

13. शयनासनास्तरणप्रावरणानि कुमारस्य मृदुलघुशुचिसुगन्धीनि स्युः; स्वेद मलजन्तुमन्ति मूत्रपुरीषोपसृष्टानि च वर्ज्यानि स्युः; असति संभवेऽन्येषां तान्येव च सुप्रक्षालितोपधानानि सुधूपितानि शुद्धशुष्काण्युपयोगं गच्छेयुः।।

Beddings, seats, spreading and covering materials of the child should be soft, light, clean and fragrant; they are to be rejected if soiled with sweat, impurities or worms and insects or urine and faecal matter. If other replacements are not possible (when an occasion arises) they themselves can be used, pillows well washed, nicely fumigated, clean and dry. Cs. sa. 8.60.

14. धूपनानि पुनर्वाससां शयनास्तरणप्रावरणानां च यवसर्षपातसीहिंगुगुग्गुलुवचा चोरकवयः स्थागोलोमीजटिलापलंकषाशोकरोहिणीसर्पनिर्मोकाणि घृतयुक्तानि स्युः।।

And, the fumigatories for the dress, the bed, the bed-spread and the covering cloth, should be *yava, sarsapa, atasi, hingu, guggulu, vaca, coraka, vayastha, golomi, jatika, palankasa, asokarohini* and the snake's discarded skin - all powdered and mixed with ghee. Cs. sa. 8.6 1.

15. मणयश्च धारणीयाः कुमारस्य खड्गरुगवयवृषभाणां जीवतामेव दक्षिणेभ्यो विषाणेभ्योऽग्राणि गृहीतानि स्युः; ऐन्द्र्याद्याश्चौषधयो जीवकर्षभकौ च यानि चान्यान्यपि ब्राह्मणाः प्रशंसेयुरथर्ववेदविदः।।

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Beads should be worn by the infant and the tips of the horns on the left side taken from the rhinoceros, dear, neel goy and bull taken when they are alive and any other materials as praised by the Brahmins that know Atharva veda. Cs. sa. 8.62.

16. क्रीडनकानि खलु कुमारस्य विचित्राणि घोषवन्त्यभिरामाणि चागुरूणि चातीक्ष्णाग्राणि चानास्यप्रवेशीनि चाप्राणहराणि चाविन्नासनानि स्युः ।।

The toys of the children should be curious, sound-producing, charming, not very heavy, with no acute edges (anywhere), incapable of being swallowed up in the month, not fatal and non-tormenting. CS. Sa. 8.63.

(e) *Hospital construction by philanthropic public*

17. आरोग्यशालां यः कुर्यान्महावैद्य पुरस्कृताम् ।
सर्वोपकरणोपेतां तस्य पुण्यफलं श्रृणु ।।

Listen (now) to the fruits of the meritorious act of one who constructs a hospital, endowed with great physicians and equipped with all the (requisite) paraphernalia. Skanda purana.

18. सम्यगारोग्य शालायामौषधैः स्नेह पाचनः ।
व्याधिनविरुजी कृत्य अप्येकं करुणायुतः ।
प्रयाति ब्रह्मसदनं कुलसप्तक संयुतः ।।

If there is one who out of his own mercy, (creates) a hospital equipped with the medicines, oleatives and purgatives and makes the sick, disease-free, he goes to the home of the God Brahma along with seven generations of his family. Nandipurana.

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6. Philosophical Background

a. *some basic statements*

1. न हि ते ते असाधारण धर्मा अनुभूयमानाऽपि शक्यः वक्तुं; न खलु इक्षुक्षीर गुडादीनाम् मधुररसभेदः शक्याः सरस्वत्याऽपि आख्यातुम्।।

"The distinctive attributes of various things cannot indeed be declared though experienced. The difference in the sweetness of sugarcane, milk, and jaggery cannot, verily, be given expression to, even by the Goddess of learning". Vacaspati I.I.3 (SR Bs. 244).

2. नामरुपविनिर्मुक्तं यस्मिन् सुतिष्ठते जगत्। तमाहुः प्रकृतिं केचिन् माया अन्ये परे तु अणु।।

"That in which the world, divested of name and shape, resides, some call *prakṛti*, others, *māya*, others atoms". (SR. Bs)

3. (An itinerant problem confronting any student of Nature is to find an explanation for its infinite variability in almost any field. It is not easy to improve upon the following *śloka* that occurs in a few other texts besides Suśruta, pointing out probably that it is from an earlier Text from which all of these authors have quoted)

स्वभावमीश्वरं कालं यदृच्छां नियतिं तथा।
परिणामं च मन्यन्ते प्रकृतिं पृथुदर्शिनः।।

Those that can see wide, consider that this (immensity of the variability of nature) has come about because of Nature (it is natural to get varied thus viz., no other explanation than to say that it is in the nature of things to get varied is possible), God, (passage of) time, change (i.e. purely accidental), destiny and transformation of evolution. Ss. Sa. 1.11.

4. कः कण्टकानां प्रकरोति तैक्ष्ण्यं, चित्रं विचित्रं मृगपक्षिणां च। माधुर्यमिक्षौ, कटुतां मरीचे, स्वभावतः सर्वमिदं प्रवृत्तम्। ...अज्ञो जन्तुरनीशोऽयमात्मनः सुखदुःखयोः। ईश्वरप्रेरितो गच्छेत् स्वर्गं नरकमेव वा। ...काल एव जगतः सृष्टिस्थिति प्रलयनिमित्तमिति कालकारणिकाः।।

Who brings about sharpness of the thorns, the curious and the wonderful (forms) of the beasts and the birds, sweetness in the sugar cane and pungency in the pepper - all of these have issued forth by their own nature...The individual creature is ignorant; he is not the master of his own happiness and grief. He goes to heaven or hell as induced by God.... Time alone is the agent of creation, existence and destruction of the world - thus hold those who consider that time is the reason (for all this). Da. Ss. Sa. 1.11.

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5. सम्यग् ख्यायते वस्तु तत्वं अनया इति संख्या तत्वज्ञानं तद् विन्दतीति संख्या सम्यग् ज्ञानं तेन व्यवहरन्तीति वा संख्या आत्मनत्वविदस्तैः सांख्यैः । संख्यातानि सम्यग् ज्ञातानि संख्येयानि ज्ञातव्य तत्वानि यैः ते संख्यात संख्येयैः परिज्ञात सकलज्ञातव्यैः ।

(the value of enumeration or numbering in definitive thinking:)

The principle or the essence of an entity is properly delineated by this (technique of numbering its features) - hence, this is (called the) discipline of numbering. The *sāṅkhyas* (or the believers in the theory of numbering as the best means of knowledge) and the knowers of the principle of soul (as well, on such perspectives), (first) secure a proper knowlege of the enumerative data and with this they transact (their business). Those by whom the enumerable and the knowable principles (in any situation) are (first) enumerated and thus known properly - they alone know fully all that is knowleable by (this) procedure of enumerating the enumerables. (What can be called typical Indian scientific thinking is found in its several schools of philosophy or *darśanas* which fall into two categories, the *āstika* (which regard *vedas* as the final authority) and the *nāstika* (which do not consider *vedas* as the final authority). The former includes the six famous schools (regarded as pairs : *sāṅkhya-yoga, nyāya-vaiśeṣika, mimāmsa-uttara* and *pūrva*); the latter consists of the three, *cārvāka* (rank materialism), *jaina* and *buddha*. Excepting the *Carvāka*, all believe in rebirth and their final aim is to secure *moksa, kaivalya* or *nirvaṇa*, a state of absolutism - an unification with Brahma or its equivalent. The means of securing this however is one of constructing a whole world view embracing all that is thinkable, essentially by logical, demonstrative and fully complete ratiocination. This is why many of the tenets here and the steps of argumentation are homely to modern science. Ayurveda is believe to be based on Sankhya view, Yoga is quite germane to medicine as it deals with mind and its regulation, while Nyāya-Vaiśeṣika are of interest as they deal with the basics of rational thinking. Hence, some aspects of only these systems are covered below).

6. ज्ञानं महधाद्रि महत्सु राजन् वेदेषु सांख्येषु तथैव योगे। यच्चापि दृष्टं विविधं पुराणे सांख्यागतं तन्निखिलं नरेन्द्र। यच्चेतिहासेषु महत्सु दृष्टं यच्चार्थशास्त्रे नृपशिष्टजुष्टे। ज्ञानं च लोके यदिहास्ति किंचित्साख्यागतं तच्च।

Whatever knowldge is found in the *vedas*, in *sankhya* and *yoga*, in the various *purāṇas*, in the intensive *itihāsas*, in the *arthaśāstra* and whatever knowledge exists in the world - all that is derived from the Sankhya. Mahābharata. Śanti 290.103-104.

(an example of the enumeration of the basic isolates as pertinent to Ayurveda)

7. कतिधा पुरुषो धीमन्। धातुभेदेन भिद्यते। पुरुषः कारणं कस्मात् प्रभवः पुरुषस्य कः ।।

Into how many (components) does the individual human person (Purusa) get differentiated in terms of his constituents?

खादयश्चेतनाषष्टा धातवः पुरुषः स्मृतः । चेतनाधातुरप्येकः स्मृतः पुरुषसंज्ञकः ।।
पुनश्च धातुभेदेन चतुर्विंशतिकः स्मृतः । मनो दशेन्द्रियाण्यर्थाः प्रकृतिश्चाष्ट धातुकी ।।

(The five primordial elements) commencing from the Sky (viz., Earth, Water,

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Fire, Air and Sky) (and) the sixth (one of animation or consciousness viz., the mind which is the basis of consciousness plus the soul) - these (six) constituents together are consider to (form an) individual human person. Some consider the constituent of consciousness alone as the individual human person. And again, in terms of the differences of its constituents, (this person) is said to be made up of twenty four elements; mind, the ten sense organs (the five cognitives and the five manipulatives), the five senses (sound, touch, form, taste, and smell) and the eight constituents of nature, *avyakta, mahān, ahamkāra, ākāśa, vāyu, agni, jala* and *pṛthvi* (viz. their *tan-māntras* i.e. the particular ultimate units). Cs. sa. 1.3 16.17. (See for further elaboration under Suśruta below).

8. (an example from the upanisads)

ब्रह्मवादिनो वदन्ति। किं कारणं ब्रह्म कुतः स्म जाता जीवाम केन क्व च संप्रतिष्ठाः। अधिष्ठिताः केन सुखेतरेषु वर्तामहे ब्रह्मविदो व्यवस्थाम्। कालः स्वभावो नियतिर्यदृच्छा भूतानि योनिः पुरुष इति चिन्त्यम्।

The protagonists of Brahma enquire (lit., say) : Brahma, what is the reason (for all this)? From where are these born? By whom do we live and where are we stationed? Ordained by whom do we move about in happiness and in other than happiness? It is to be thought (here probably) that time, natue, destiny and sheer accident is the Womb of the person.

b. *sankhya (the philosophy of proceeding with numbering the ultimates in the universe)*

("The most fundamental conception is that there are two entirely distinct essences existing from eternity viz. *Prakṛti* (nature or matter) also called *pradhāna* and *avyakta* and *puruṣa* (soul, spirit, the knowing subject). The second fundamental conception is that *puruṣas* are many. Another most characteristic feature of Sankya is the doctrine of three gunas (factors) called *sattva* (light, intelligent), *rajas* (energetic, active, domineering), *tamas* (coarse, inert, enveloping, dark). *Prakṛti* is said to be constituted by the 3 *guṇas* when they are in equilibrium. The Sankhya analysed all physical and mental phenomena. The lowest factor is the heavy impenetrable matter and coarse foolish impulses. They are *tamas* (described as *guru* heavy and *varaṇaka,* enveloping). Then there is the factor of constant change in the physical world as well as the mental. This is *rajas (cala* changing and *upastambhaka* exciting). The third factor or element in the world is the varied operation of consciousness that leads to knowledge and experience, which is called *sattva (laghu* , light, *prakāśaka* luminous). These three factors or elements combine in various proportions and make up the evolving universe. *Pradhāna* is not different from the *guṇas.* But it is only the name of the primordial matter before evolution starts. *Prakṛiti* being *anādi* (beingless) and eternal, the Sankhya system did not postulate God as Creator and held God to be a superfluity. The Sankhya propounds a theory of cosmic evolution which is practically as reasonable as any modern theory of evolution. It is probably the earliest attempt to furnish an answer from reason alone to the question about the origin of the world, about the nature of man and his relation to the physical world and man's future destiny. Kane, P.V. 1358)).

9. अथातः सर्वभूतचिन्ताशारीरं व्याख्यास्यामः।

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"We shall now comment upon an enquiry (*cinta sarira*) as it concerns the body of the created beings as a whole". Ss. Sa. 1.1.

10. सर्वभूतानां कारणमकारणं सत्वरजस्तमोलक्षणमष्टरूपमखिलस्य जगतः संभवहेतुरव्यक्तं नाम। तदेकं बहूनां क्षेत्रज्ञानामधिष्ठानं समुद्र इवौदकानां भावानाम्।

"The cause of all (these created) beings (*bhuta, that which has happened or has come about*) is (itself) causeless (viz., it has no prior reason for its own existence). It has three characteristics, *satva, rajas* and *tama* and eight forms. It is this that is the reason for the origin of the whole of this world. It is called the Unmanifest and the Unknown (*avyakta*). This single (entity) is (also) the basis of the many Conscious-Knowers-of-the-Corporeal-Frame (*Kṣetrajna*) just as the single ocean is the basis of the many appearances (bubbles, froth, waves, whirlpools, etc.) of its water." Ss. sa. 1.3.

(The eight forms (mentioned above, of the primordial cause) are the eight factors which evolve the whole visible world as held by the ancient Sankhya system of philosphy to which SS obviously alludes here. They are: *avyakta* (the Unmanifest with which we have to perforce start), *buddhi* (Intellect), *mahat* (the Great), *aham-kāra* (the Ego) and the 5 *tan-mantras* (or the Subtle units, as shown below:)

11. तस्मादव्यक्तान्महानुत्पद्यते तल्लिग एव। तल्लिगाच्च महतस्तल्लक्षण एवाहंकार उत्पद्यते ; स त्रिविधो वैकारिकस्तैजसो भूतादिरिति। तत्र वैकारिकादहंकारात्तैजस सहायात्तल्लक्षणान्येवैकादशेन्द्रियाण्युत्पद्यन्ते।

"From the Unmanifest, is produced the Great (i.e., or the Intellect of *buddhi*). (*We can justifiably call this Intellect as Great, for it is because of this alone, the whole world of the knowing organisms that we now see is evolved*). This *mahat* or the Great has the same (three) characeristics (of *sattva, raja* and *tamas*). From this *mahat* arises the Ego which also has the same (three) characteristics (*sattva, raja* and *tamas*). This (Ego) is of three kinds as follows: (i) that which is subject to modification (*vaikarika*), (ii) that which is excitable or irritable (*taijasa*) and (iii) that which commences more beings (*bhūtadi*)., viz., reproductive.

Herein, eleven indriyas or sense organs or sensors are produced from the modifications and excitations that occur in the Ego." Ss. sa. 1.4.

(Literally the Text states that these sensors are created from the modificatory aspect of the Ego with the assitance of its other aspect of excitability. Sense organs are created (to serve the needs be of) the Ego. Therefore they *can* be said to have been created by the Ego itself. This is possible because, the Ego by its very nature is excitable (*taijasa*) as already indicated. Put this way, the statement of the Sūtra would not jar modern biologists even. They would thereby understand that: a living organism, presumably only animals, has an Ego or a Self; This Ego always tends to modify itself as it is excitable, i.e., it reacts to the environment, which is always changing; because of this excitability, it continuously modifies itself to suit the environment best. During such modifications, it has developed eleven sense organs or sensors to serve its detailed cognising of the environment.

These sensors are also said to possess the three qualities: *satwa* (having the innate or the natural state, i.e., balanced and homeostatic), *raja* (overactive and coloured in some esoteric way) and *tama* (dull and negative). Even though Sustuta states that there are elevan sense organs, soon below, while discussing the

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tanmātras of sensation, he comes back to the typical five: hearing, feeling, seeing, tasting and smelling. Everyone of these five has its environmental counterpart or the basic triggering in the environmental factors. These are: air or the atmospheric medium for sound, light for the generation of eye, water as the medium of solubility whence only the sensation of taste will arise and the properties of a solid or the earth, which is the final basis for the sense of smell.)

12. तद्यथा - श्रोत्रत्वक्चक्षुर्जिह्वाघ्राणवाग्घस्तोपस्थपायुपादमनांसीति ; तत्र पूर्वाणि पंच बुद्धीन्द्रियाणि, इतराणि पंच कर्मेन्द्रिणि, उभयात्मकं मनः ।

"These eleven Sense organs are: ear, skin, eye, tongue, nose, speech, hand, generative organ, evacuative organ, foot and mind. Of these, the first five are the organs of intelligence, the next five are the organs of action. Mind partakes of both the characteristics (viz., it is an organ of intelligence as well as action)." Ss. sa. 1.4. 14.

13. भूतादेरपि तैजससहायात्तल्लक्षणान्येव पंचतन्मात्राण्युत्पद्यन्ते - शब्दतन्मात्रं, स्पर्शतन्मात्रं, रुपतन्मात्रं, रसतन्मात्रं, गन्धतन्मात्रमिति ; तेषां विशेषाः - शब्दस्पर्शरुपरसगन्धाः, तेभ्यो भूतानि - व्योमानिलानलजलोर्व्यः ; एवमेषा तत्वचतुर्विंशतिर्व्याख्याता ।

"From out of the (created) beings themselves and with the assitance of their excitability are produced the five *tanmātras* (the subtle ultimate units of *that* viz., with which we are concerned: *tat*-that; *mātra*-unit). The (*tanmātras*) have the characteristics that are the same by the assistance of which they have come about. The subtle units are: that of the sound, the touch, the form, the taste and the smell. The specialities of them (viz., the particular sensations they afford to the organism) are: sound, touch, form, taste or smell.. The (created) primordial beings (viz., *their counterparts in physical nature*) that are(responsible) for them (or, in other words their substrate in the environment) are respectively: sky, wind, fire, water and earth.

In this way we have commented upon the twenty-four principles (viz., 1 *avyakta*, the Unmanifest Reality, the 5 *tanmatras*, the Subtle Units concerned, the 5 *mahabhutas* or the Elemental (physical) Principles, the 11 *indriyas* or the Sensors, the *manas* or the Mind, and the 1 *puruṣa*, the Individual Human being). This completes the enumeration of what all we may find as relevant and of interest to ourselves as ayurvedists, i.e., those that deal with *ayu*, the life" Ss. su. 1.4.

14. तत्र बुद्धीन्द्रियाणां शब्दादयो विषयाः ; कर्मेन्द्रियाणां यथासंख्यं वचनादानानन्दविसर्गविहरणानि ।

"Herein, the sound and the like are the objects for the organs of the intellect or the organ of knowing. (The objects) for the organs of action are as many as (already) enumerated and are dependent on the span of the individual human being. From speech (which as stated above is also one of the organs of action) one enjoys, gives up or sports." Ss. sa. 15.

15. अव्यक्तं महानहंकारः पंचतन्मात्राणि चेत्यष्टौ प्रकृतयः शेषाः षोडश विकाराः ।

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"The Unmanifest, the Great, the Ego and the five Subtle Units - these are the eight primary substances. The rest sixteen are the Modifications thereof." Ss.sa.1.6.

(We shall attempt a modernistic version of these ideas).

Whatever exists in the universe now is a thing that has come about after an act of creation. Hence it is a *bhūta* : that which has come about or happened or is (probably) created. Since, for creation, there should be a creator, what caused these *bhūtas* to come about- in the final analysis - is an entity which we have to *perforce* hold as causeless. Otherwise it would also be a *bhuta* and the argument would stretch *ad infinitum*. It is this causeless Entity that however is actually *the* final cause of the whole of the Universe. The Universe as we now see can always be discerned as to be having three characteristics, in every part of it: *sattva* (the innate essence or the reality of it), rajas (a state of it, activated or coloured in some way) and *tamas* (a state of dullness as compared to its real essence).

We are interested in tracing the origin and evolution of the sentient beings and not the inorganic world of the *panca mahabhūta*. It is postulated that there arose from this Unamanifest a factor which we can call as Intellect. This enables the organism that possesses it, to know, i.e., it endows it with a consciousness. This is really a very important factor. Hence only it was otherwise called the Great; for, we can easily see that it is this factor of *buddhi* or Intellect from which all the organisms we now see about us have become evolved (in course of time). Does it mean, that evolution of organisms was regarded at least partly as owing to the conscious involvement of the knowing organisms and not wholly due to the play of blind factors of nature? In other words do we probably have here an advocacy of Creative Evolution as the early biologists before Darwin would have it rather than just Natural Selection?

The further argument seems to run as follows. In the very beginning (of this universe), beyond which we cannot think at all, there was a factor which is best described and named as *avyakta* or the Unmanifest. For, everything else has come about thence onwards by a process of evolution and therefore, this *avyakta* or the Unmanifest, is the womb of the whole of this Universe. Whether one agrees with this run of the thinking or not it is very clear, that Indian thinking always stressed on the existence of an Evolution and not a Special creation as pre-Darwinian votaries postulated in the West. This does not mean that Darwinian theory was discovered by Indians and much less that there was anything then like the present day working out of the evidences of the evolutionary differentiation of organisms. What is meant here is: the idea of evolution was grasped and accepted; the apparent differences among the organisms were not there from the very beginning - they have come about by a historicity of prior differentiation. The next factor stipulated for explaining evolution of the Universe (apparently, the Universe of the living) from this *avyakta* is that of the coming into being of a factor of *buddhi* or Intellect, which enables one to know. For instance, discriminating between what is injurious and/or advantageous to the organism concerned, can be easily considered to be the first effect of this Intellect. Every animal, even an ameba may be said to have something which we can call as discrimination. it also adapts itself to what is advantageous and what is not. All the tremendous differentiation that has taken place subsequent to amoeba can be ultimately traced to the play of this reaction which can be called not incorrectly as Intellect. Again, it is not that Susruta knew what was amoeba or how organic evolution acts here. It is merely that if Susruta were to be confronted with these factors, now, he would probably justify himself in

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this way. This factor of Intellect is appropriately designated as Great or *Mahat*, since it is during its play, the entire cosmos of the living has become evolved. From intellect (may be in later day organisms as we would now say and definitely so in man) there arose the next factor of Ego- a factor by which the organism knows itself as something separate from the rest of the environment.

In the case of the sentient beings, apart from the obvious body, there is one more entity, viz., the knower who sits within their corporeal frame (*kṣetra*) and knows (*jnā*) it and hence called *kṣetrajna*. This probably is the Ego. The frame itself however is just physical as the rest of the Universe. These knowers are held to be many but finally, they were also caused in the beginning by the primordial Unmanifest. Though these knowers are many, they are all but different aspects of the single Unmanifest just like the bubbles, froth and so forth of the ocean. The eight forms of the Universe enumerated above are actually the eight factors which evolve the whole visible world. They are as follows: 1. The Primordial single Unmanifest (which we cannot avoid in anyway), 2. Intellect of the sentients which we also designated as the Great, because, its effect is truly very great, since it is the principle of knowing by which, much of the evolution of this universe (of organisms) is effected. 3. Intellect leads to the development of a knowing of oneself as something separate from the rest of the universe. This is Ego. We can hold Ego to have been born from this Intellect thus. For, the knowing of oneself as distinct from the rest is *the* final definition of Ego. 4. For the sake of such a knowing, the sentient being has developed five sensors. To everyone of these sensors, we can hold that there is a special individualistic essence that cannot be equated with any of the other four viz., sound as a sensation is something quite different from sight as a sensation. The two are non-reducible to each other (*"savyam adhyātma" as the Text puts it*). 5. that is why it is a *tan-mātra*-that alone and none else. These five are: the sense of sound, sight, smell, touch and taste. In the organism, everyone of them has a tanmatra. They have their counterparts in physical nature as sky, energy, earth and water. The Ego is subject to three important factors: modifiability, excitability and reproductiveness.

Put this way, the validity of the basic argument as well as ts novelty at times becomes apparent).

16. तत्र सर्व एवाचेतन एष वर्गः, पुरुषः पंचविंशतितमः कार्यकारणसंयुक्तश्चेतयिता भवति। सत्यप्यचैतन्ये प्रधानस्य पुरुषकैवल्यार्थं प्रवृत्तिमुपदिशन्ति, क्षीरादींश्चात्र हेतूनुदाहरन्ति।

"Therein, the whole of this group (viz., of the twenty-four principles) is non-percipient, insentient and inert (*acetana*). They become percipient, sentient and animate (only) when they get coupled with the twenty-fifth principle (of *purusa*, the individual being - the Self) who initiates the cause and the effect (or the responsiveness of the living). Eventhough this group (of the twenty-four basics) is by itself nonpercipient, insentient and inert, it is they that teach (i.e., *are responsible to the formation of*) a tendency or a prediliction to activity, solely meant for the (welfare of the) individual Self. One of the illustration (*of analogy*, that we can advance here is:) the milk from the breasts which though inert in itself, acts as the (primordial) cause for (all) the activity of the child.

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अत ऊर्ध्वं प्रकृतिपुरुषयोः साधर्म्यवैधर्म्ये व्याख्यास्यामः । तद्यथा - उभावप्यनादी, उभावप्यनन्तौ, उभावप्यलिंगौ, उभावपि नित्यौ उभावप्यनपरौ, उभौ च सर्वगताविति ; एका तु प्रकृतिरचेतना त्रिगुणा बीज धर्मिणी प्रसवधर्मिण्यमध्यस्थ धर्मिणी चेति, बहवस्तु षुरुषाश्चेतनावन्तोऽगुणा अबीजधर्माणोऽप्रसवधर्माणो मध्यस्थधर्माणश्चेति।

Hence forth, we shall comment upon the similarity and dissimilarity in the nature of *prakṛti* - the inert Nature and *puruṣa* the Individual Sentient Self. This is as follows: both of them have no beginning, no end and no discernible form; both are eternal, both have nothing beyond them and both are occurring everywhere (*This is summation of the similarity between the nature and the Self*).

Prakṛti is single, nonsentient, endowed with three qualities (viz., of sattva, raja and tama). It is of the nature of a seed, (potentially capable of developing later into something else, for instance, as a grown-up-form) and is procreative (it produces off springs). It stays not in the middle (i.e., it is always dynamic). The Individual selves (on the contrary) or the pursusas are many; they are sentient; there is no seed form and grown up form for them (i.e., they just exist as they are, there is no developmental changes for them); there is no procreation either. This (purusa) stays in the middle, i.e. is not changing (*This is a summation of the differences between the Nature and the Self*).

तत्र कारणानुरूपं कार्यमिति कृत्वा सर्व एवैते विशेषाः सत्वरजस्तमोमया भवन्ति ; तदंजनत्वात्तन्मयत्वाच्च तद्गुणा एव षुरुषा भवन्तीत्येके भाषन्ते।

Therein, on the basis that any act is as per the cause that brought it about, all of these specialities (i.e., the infinite changes that occur in prakrti) get endowed with the three qualities of *sattva, raja* and *tama* . Because of its getting *anointed* and being almost filled (in this way) with these infinite changes of the *prakṛti,* the *puruṣa* (i.e., the individual person) himself gets the qualities that ensue thereby. So say some experts. Ss. sa.1.8.10.

17. स्वभावमीश्वरं कालं यदृच्छां नियतिं तथा।
परिणामं च मन्यन्ते प्रकृतिं पृथुदर्शिनः ।।

(*the philosophical ultimates for medicine*) "The standpoint that is relevant on the contrary in the science of Medicine is (as follows): Those that can see wide (viz., the experts of learning) consider that the cause of *prakrti* is : nature, God, time, change, destiny, and transformation."11

(This particular statement is ever fresh and speaks high for the penetrative thinking that is displayed here in SS. This is a statement that sums up all we can say *even now* to explain the richness infinite of Nature. This richness has come about by simple natural causes or an act of God or just by the efflux of time or pure chance or predertermined destiny or gradual change of transformation (viz., evolution?). We can hardly add any other alternative even now, apart from these six).

18. तन्मयान्येव भूतानि तद्गुणान्येव चादिशेत्।
तैश्च तल्लक्षणः कृत्स्नो भूतग्रामो व्यजन्यत।।
तस्योपयोगोऽभिहितश्चिकित्सां प्रति सर्वदा।
भूतेभ्यो हि परं यस्मान्नास्ति चिन्ता चिकित्सिते।।

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"They (i.e., these great experts) teach that (all the (created) beings are filled with these (five elemntal principles) alone and have these (there) qualities alone. By these (eight) again have been fanned out (i.e., created) the entire gamut of the (created) beings that have (in turn, these very charcteristics (again).

They (in fact) point out an usefulness of this concept for the purpose of medicine always. There is no question of using anything beyond the created beings or the *bhūtas* (i.e. for e.g., the Unmanifest) in the activity of medicial treatment. Ss. sa. 1.12.13.

यतोऽभिहितं - "तत्संभवद्रव्यसमूहो भूतादिरुक्तः" भौतिकानि
चेन्द्रियाण्यायुर्वेदे वर्ण्यन्ते, तथेन्द्रियार्थाः ।
इन्द्रियेणेवन्द्रियार्थं तु स्वं स्वं गृहणाति मानवः ।
नियतं तुल्ययोनित्वान्नान्येनान्यमिति स्थितिः ।।

We have ourselves stated already that 'What causes these beings is the collection of the material entities alone'. In Ayurveda, the *indriyas* or the sense organs are also described to be physical (in nature) and the objects of these senses are also physical. (That is why we have written above that there is no question of utilising anything beyond the material and the physical, for the sake of the medical treatment. *It is important to note that there is therefore no appeal to the metaphysical even in theory*). Ss. sa. 1.14.

There is a saying here: man secures the objects of the different senses by the organs of the senses concerned. This is so possible because the senses and the sense organs are born from a similar cause (in every case). If (on the contrary) they had been from different causes (altogether), such a situation (*of say, grasping a sound only by ear and not eye*) would not have become possible. Ss. sa. 1.15.

न चायुर्वेद शास्त्रेषु उपदिश्यन्ते सर्वगताः क्षेत्रज्ञा नित्याश्च ; असर्वगतेषु च क्षेत्रज्ञेषु नित्यपुरुष ख्यापकान् हेतूनुदाहरन्ति।

In Ayurveda, we do not teach the all pervasive, the knower of the corporeal-frame and the eternalities. We (merely illustrate i.e., we solely concern ourselves with) the causes that proclaim the (existence of the) eternal purusa, that lies within the (many) knowers of the corporeal frame and that which also do not pervade everywhere (i.e., are localised in such and such a region). (*In other words, we solely deal with the body - including the mind which is but its organ and not the purusa itself*).

आयुर्वेदशास्त्रेषु असर्वगताः क्षेत्रज्ञा नित्याश्च, तिर्यग्योनिमानुपदेवेषु संचरन्ति धर्माधर्मनिमित्तं ; त एतेऽनुमानग्राह्याः परमसूक्ष्माः चेतनावन्तः शाश्वता लोहितरेतसोः सन्निपातेष्वभिव्यज्यन्ते, यतोऽभिहितं - 'पंचमहाभूतशरीरिसमवायः पुरुषः' इति ; स एप कर्मपुरुषश्चिकित्साधिकृतः । तस्य सुखदुःखे इच्छाद्वेषौ प्रयत्नः प्राणापानावुन्मेपनिमेषौ बुद्धिः मनः संकल्पो विचारणा स्मृतिर्विज्ञानमध्यवसायो विपयोपलब्धिश्च गुणाः ।

In the *śāstras* of Ayurveda, the non-pervasive (i.e., the localised) and the knowers of the corporeal frame are (regarded as to be) eternal and these wander about in the births of the infra man, man and god due to the cause of *dharma* and *adharma* (that the Individual carries out). (But) these things (i.e., the truth of

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these statements) are to be grasped only by means of inference (and not direct observation). The effulgent seminal principle (*lohita retasa*) has a highly subtle sentience and is eternal. And this becomes visible (only) when all of the above (quoted) principles (viz. the 28 stated above) come together. That is why we have said that the Individual person is a *coinherence* of the five *mahābhūtas* and the *śarīri* (and not a combination). It is this person (the *puruṣa*) who indulges in the several activites (and therefore becomes the *karma puruṣa*). All medical treatments are towards this Person-who-indulges-in-activity (*karma puruṣa*).

The qualities (we can discern) in him (i.e., the totality of the actions this individual Person of *karma puruṣa* indulges in) are (i.e., can be listed under several categories such as): happiness and unhappiness, likes and dislikes, effort and exertion, breathing and evacuation, winking in and winking up, intellect, mentation, conceiving, thinking, memory, specialised knowledge, mental effort or apprehension and securement of the objects." Ss. sa.1.16, 17.

c. yoga (*the philosophy of proceeding by actively uniting onself with the Absolute*)

"Yoga is defined as the elimitation of or mastery over the functions (activities) or fluctuation of the mind. This is provisionally explained by Vyāsa as *samādhi*. The different stages (*bhūmis*) of this mind are five, being restless (*kṣipta*), infatuated (*mugdha* or *mūḍha*), distracted (*vikṣipta*), one-pointed (*ekāgra*) and controlled..The goal of *yoga* viz., the soul that is the seer abides in its own form then (i.e. when the functions of the mind have been mastered), while in ordinary life the soul appears to assume the forms of the fluctuations of the mind. The vrittis (*course of action* MW) are five, some of which are afflicted by hindrances (*kleśas* - obstacles) . These are five, *avidya, asmita, rāga, dveṣa, abhiniveśa,* ignorance or lack of knowledge or learning, egoism, passion, hatred and intentness) and the others are not so hindered. (Those that are hindered are to be mastered or eliminated and the others are to be accepted). The five *vṛttis* are: *pramāṇa* (means of valid knowledge), *viparyaya* (wrong conception), *vikalpa* (fancy), *nidrā* (sleep), *smṛti* (memory). *Pramāṇas* are three, *pratyakṣa* (perception), *anumāna* (inference), *āgama* (verbal testimony). The means for the Suppression of *vṛttis* are *abhyāsa* (Practice), and *vairāgya* (Passionlessness) (after Kane.. p. 1409)

(The word yoga coming from the root *yuj*, to yoke or unite refers to that unique philosophy or world-view developed in ancient India by the seers having realised the truth and reality of the existence of the Great Absolute God. Its Supremacy to the Individual soul in each being is that it shows the need and the consequent goal of uniting the latter with the former, detailing the technicality of which constitutes the subject matter of the yogic texts. The most famous of these early Texts is Yogasutras of Patanjali, which is given in some considerable detail later. Its relevance to Medicine is that it represents a means of harnessing the full energy of man - mental and spiritual and incidentally the physical as well, to a lofty goal bestowing therefore an effulgent radiance, a positive health - that would destroy diseases and confer a tranquil attitude of life in the transient events of the world. It is because of such a reason, that this view has become very popular of late in the West as well as the East, leading to much scientific explorations of the claims of *yoga* and the power of mind over the body and so on. There also occur further detailed versions even in ancient times such as Hatayoga, Raja yoga etc. and as well as in modren times, such as the Integral yoga of Sri Aurobindo).

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(i) *Caraka's mention of yoga*

19. आवेशश्चेतसो ज्ञानमर्थानां छन्दतः क्रिया। दृष्टिः श्रोत्रं स्मृतिः कान्तिरिष्टतश्चाप्यदर्शनम्।।
इत्यष्टविधमाख्यातं योगिनां बलमैश्वरम्। शुद्धसत्वसमाधानात्लत् सर्वमुपजायते।।

Entering into other's body, knowing other's mind, activity as he likes concerning all the (five) senses, clairvoyance and clairaudience, remembrance, lustre, seeing even the invisible as he desires - these are said to be the eight powers of opulence of the yogis. Everything becomes possible when pure mind (free from rajas and tamas) is coupled with the Self. Cs. sa. 1.141.

20. योगे मोक्षे च सर्वासां वेदनानामवर्तनम्। मोक्षे निवृत्तिर्निःशेषा योगो मोक्षप्रवर्तकः।।
आत्मेन्द्रियमनोऽर्थानां सन्निकर्षात् प्रवर्तते। सुखदुःखमनारम्भादात्मस्थे मनसि स्थिरे।।
निवर्तते तदुभयं वशित्वं चोपजायते। सशरीरस्य योगज्ञास्तं योगमृषयो विदुः।।

(Both) happiness and unhappiness are set in motion by the close contact of self, sense organs, mind and the objects of the senses. When the mind stays steadfast in the self, then there will be a reverting from both (the happiness and the unhappiness) and the (self) controlledness will then come about, along with that of the body. The sages knowing yoga regard this state as yoga. Cs.ca. sa. 1.139.

21. योगेन चित्तस्य पदेन वाचां मलं शरीरस्य च वैद्यकेन।
योऽपाकरोत् तं प्रवरं मुनीनां पतंजलिं प्रांजलिरानतोऽस्मि।।

I bow down in salutation to the great sage Patanjali who removed the impurity of the mind by his (text on) yoga (i.e. Yoga sutra); of the words (by his Text on Grammar i.e. Patanjala Bhasya on Panini), and of the body (by his Text on) Medicine. Cited in Yogavaritka by Vijnāna Bhikṣu.

(Though it is not usually accepted by the scholars now that the author of these three separate Texts on Yoga, Grammar and Medicine has been one and the same Patanjali, this quotation and the one below emphasise well the common feature among these three disciplines, viz., that of cleaning the impurities of mind, speech and body, respectively).

22. The impurities that remain firm in the body, the speech and the objects of intellect (viz the mind) - the processes of cleaning them are by means of the Texts of Medicine, (linguistic) characteristics (i.e. Grammar) and (those that deal with the) Supreme Sprit (i.e. Yogic Texts). Vakyapadiya 1.148.

(Among the six *darsanas*, it is *yoga* that is most popular in modern times and much worked out in many facets, mainly as it is concerned with securing a positive health and as it also points out to still unexplored regions of human mind. These facets include yogic exercises, breath control, yoga and therapy, philosophical insights that yoga suggests and so on. Much of this is also available in English, and is therefore left out here. Even among Sanskrit references, only Patanjali's yoga sutra is presented under analytical subtitles. The style is classically aphoristic, every *sūtra* capable of yielding much valuable material, depending upon the calibre and the need of the contemplator. The style also permits very close, incisive logic which exists throughout the Text, which the reader is invited to appreciate)

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(ii) *from Patanjala yoga Sutra*

23,24. योगश्चित्तवृत्तिनिरोधः ।। तदा द्रष्टुः स्वरुपेऽवस्थानम् ।। वृत्तिसारुप्यमितरत्र ।। वृत्तयः पंचतय्यः क्लिष्टा अक्लिष्टाः ।। प्रमाण-विपर्य्यय-विकल्प-निद्रा स्मृतयः ।। प्रत्यक्षानुमानागमाः प्रमाणानि ।। विपर्य्ययो मिथ्याज्ञानमतद्रुपं प्रतिष्ठितम् ।। शब्दज्ञानानुपाती वस्तुशून्यो विकल्पः ।। अभाव प्रत्ययावलम्बना वृत्तिर्निद्रा। अनुभूतविषयासम्प्रमोषः स्मृतिः ।।

definition: Yoga is restraining the activity of the mind.
effect : When the mind is thus restrained, the seer (i.e. the yogi) will abide in his own natural (i.e. changeless) state.
effect, otherwise : If the mind is not restrained thus, the seer will identify himself completely with whatever activity that the mind is currently engaged in.
activities : Activities of the mind are of five kinds - they are (moreover classifiable further into two types) distressful and distressless.
specifications of the activities : These (five activities) are: (comprehending) the true knowledge (i.e. a provable knowldge), (securing a) perverse knowldge, (indulging in) fancy, (getting) sleep and (active) remembrance or recollection (note that, sleep is considered as an activity of the mind).
the means of proof : The proofs (that the mind resorts to, in order to secure the true knowledge) are three: direct observation, inference and the traditional texts (concerned).
perversion : Perversion is false knowledge and this is what does not (actually) stay (i.e. abide) in the true natue of the substance (that the mind currently comprehends). (Perversion is of three types: doubt, *samśaya*, inversion i.e. postulating a complete opposite, *viparyaya* and continued ratiocination, *tarka* even after the true knowledge is obtained).
fancy : Fancy is what one, (immediately) assumes to be true by the (mere) hearing of a sound as if it is a necessary corollary (*anūpāti* ; and without any further careful consideration of the reality) though this assumption is (simply) absent (in the substance or, in the nature of the things) y.v. 2-9.
sleep : To (take recourse to the non-absence (of any mental activity whatsoever) is sleep. (Sleep is also an activity of the mind where, however, the chief feature is: the absence of any thing whatsoever - excluding however, the dreams, a subject that is treated elsewhere).
remembrance : Not losing (literally a non-loss) of what has been experienced previously (and therefore the possibility of its beign recalled.) is: remembrance. y.s. 2-11.

25. अभ्यासवैराग्याभ्यां तन्निरोधः ।। तत्र स्थितौ यत्नोऽभ्यासः ।। स तु दीर्घकालनैरन्तर्य्यसत्कारा सेवितो दृढभूमिः ।।

how is this restraining possible : Restraining of the mind from its activities is (to be achieved) by (repeated) practice (of controlling it) and (an attitude of) renunciation.
practice : Sustained effort is practice. It is this practice that constitutes a firm foundation or a *terra firma* (for mind control) when it is continued for a long time uninterruptedly and with great and true faith. 12, 13, 14.

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26. दृष्टानुश्रविक विषयवितृष्णस्य वशीकारसंज्ञा वैराग्यम्।।

renunciation : Complete controlling of the thirst of the sensual desire for what has been seen earlier or heard earlier is the sign of Renunciation. y. 8.15.

27. व्याधिस्त्यानसंशयप्रमादालस्याविरतिभ्रान्तिदर्शनालब्धभूमिकत्वानवस्थितत्वानि चित्तविक्षेपास्तेऽन्तरायाः।।

impediments (for yoga) : Disease, mental inertia, doubt, mistake, laziness, incontinence, a standpoint secured by a confused perspective and unsteadyness - these constitute the deviation of mind (and) *they* are impediments (in the path of yoga) y. s.8.30.

28. तत् प्रतिषेधार्थमेकतत्वाभ्यासः।। मैत्रीकरुणामुदितोपेक्षाणां सुखदुःख पुण्यापुण्यविषयाणां भावनातश्चित्तप्रसादनम्।।

how to overcome them : Practising (to follow some) single principle (as detailed below, and as it suits the inclination of the individual concerned) is the means to overcome these impediments. The mind becomes gracious and serene if one assumes an attitude of friendliness, compassion, cheerfulness and disregad respectively in the place of happiness, distress, sacredness and sin. y. s. 21.32,33.

29. अविद्यास्मितारागद्वेषाभिनिवेशाः क्लेशाः।। अविद्या तु क्षेत्रमुत्तरेषां प्रसुप्ततनुविच्छिन्नोदाराहरणम्।।

distress : Non-learning, egoism, attachment, hatred and tenacity - these constitute the distresses (of the mind). Non-learning (of the true nature of things) is the creating ground for the remaining four. These(latter) exist sometimes asleep (i.e. covert), feeble or disrupted or (they may also occur as) very evident.

30. अनित्याशुचिदुःखानात्मसु नित्यशुचिसुखात्मख्यातिरविद्या।।

What is Non-learning? Non-learning is the presumption of eternity, purity, happiness and selfness in what is non-eternal, impure, unhappy and non-self.

31. दृग्दर्शनशक्त्योरेकात्मतैवास्मिता।। सुखानुशयी रागः। दुःखानुशयी द्वेषः।

egoism : Assumption of an unity between the seen and the seer is egoism. (Self is the actual seer. This is pure, always holy, endless and immortal. What is its capacity to see i.e. what is the machinery at its disposal to see (or touch etc.)? These are *citta*, a thinking mind, *buddhi* - intellect, a discrimination,. etc.) Passion or attachment is that which closely follows after and dwells on pleasure. Aversion or hatred is that which springs from dwelling on pain. y.s.3.8.

32. तत्परं पुरुषख्यातिर्गुणवैतृष्ण्यम्।

That extreme lack of thirst, even of the qualities (of the senses), shows out the real person or the *purusa* within man (the purusa or the absolute God as He resides in an individual being). y.s I. 16.

33. वितर्कविचारानन्दास्मितानुगमात् सम्प्रज्ञातः।।

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(Samadhi (an intense contemplation on this purusa so as to identify the contemplator with the object meditated upon - the *eight and the last stage of yoga) and its types :*

This is divided into two varieties: One is called *sampragnata* or that which brings perfect knowledge of the object of meditation and the other, the *asampragnata* or that in which nothing is known but in which the Self only remains in full glory. The *sampragnata* is of four varieties. In this kind of *samadhi* come all the powers of controlling nature. *Sampragnata* is of four kinds, *vitarka* etc. - after Swami Vivekananda)

(The state of *samadhi* called) *sampragnata* (when what is contemplated upon becomes fully known to the yogi) is so called because it is accompanied with ratiocination, deliberative discernment, blissfulness and identification with the self. y.s I.17.

34. विरामप्रत्ययाभ्यासपूर्वः संस्कारशेषोऽन्यः ।।

There is another (type of *samadhi*) which is attained by the constant practice of cessation of all mental activity, the mind retaining then, only the unmanifested impressions. 18.

35. भवप्रत्ययो विदेहप्रकृतिलयानाम् ।।

(This *samādhi* when not followed by extreme non-attachment) becomes the cause of the remanifestation of the gods and of those that become merged in nature. 19.

(The gods of the Indian system represent certain high offices which are being filled successively by various souls. But none of them is perfect - Swami Vivekananda)

36. श्रद्धावीर्य्यस्मृतिसमाधिप्रज्ञापूर्वक इतरेषाम् ।। ईश्वरप्रणिधानाद्वा ।। तीव्रसंवेगानामासन्नः ।।

To others, (this *samādhi*) comes through faith, (their own) prowess, memory; it is very near for those who have an intensity (of these things). Or, (it comes) by profound devotion to God, concentration and wisdom or discrimination 20,21.

मृदुमध्याधिमात्रत्वात्तोऽपि विशेषः ।।

1. Even among these (who have such an intensity), there is a further differentiation as to whether this intensity) is mild, medium or very extensive. 22.

37. क्लेशकर्मविपाकाशयैरपरामृष्टः पुरुषविशेष ईश्वरः ।। तत्र निरतिशयं सर्वज्ञत्वबीजम् ।। स पूर्वेषामपि गुरुः कालेनानवच्छेदात् ।।

God or The Great Absolute is a special *puruṣa* or Person untouched by misery, the result of action and desires. In Him becomes unsurpassingly manifest the omniscience which in others is only in the form of a germ. He is the teacher of even the ancient teachers, being not limited by time. 24-26.

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38. तस्य वाचकः प्रणवः ।। तज्जपस्तदर्थभावनम् ।।
ततः प्रत्यक् चेतनाधिगमोऽप्यन्तरायाभावश्च ।।

His manifesting word is Om. The repetition of this Om and meditating on its meaning (is an easy way to attain *samādhi*). From that (process) is gained thorough introspection, the knowledge of the living self, who is within every sentient being and also the destruction of obstacles (that come in the way of realising Him). 27-29.

39. दुःखदौर्म्मनस्यांगमेजयत्वश्वासप्रश्वासा विक्षेपसहभुवः ।।
तत् प्रतिषेधार्थमेकतत्वाभ्यासः ।।

disturbances in samadhi Grief, mental distress, tremor of the body and irregular breathing arise along with (any) detraction in this *samadhi*. Toward this off one should practice the following of one single principle. 31, 32.

मैत्रीकरुणामुदितोपेक्षाणां सुखदुःखपुण्यापुण्यविषयाणां भावनातश्चित्तप्रसादनम् ।।

Friendship, mercy, gladness, indifference in being thought of in regard to subjects, happy, unhappy, good and evil respectively pacify the thinking mind or the *citta* 33
(These aid in keeping the *samadhi* undisturbed)

40. प्रच्छर्दन विधारणाभ्यां वा प्राणस्य ।।

Or (this same result of securing non-detraction in samadhi can be achieved) by throwing and restraining of breath. 34.

41. विषयवती वा प्रवृत्तिरुत्पन्ना मनसः स्थितिनिबन्धिनी ।। विशोका वा ज्योतिष्मती ।। वीतराग - विषयं वा चित्तम ।। स्वप्न - निद्रान्तानालम्बनं वा ।। यथाभिमतध्यानाद्वा ।।

Or, (by) the practice of those forms of concentration that bring extraordinary perceptions and cause thereby perseverance of the mind (this, is another way to yoga). Or, (by the meditation on) the Effulgent One who is beyond all sorrow. Or, (by meditation on) the mind that has given up all attachment to sense-objects. Or, (by meditation on) the knowledge that comes in sleep. Or(by meditation) on anything that appeals to one (as good). 35-39.

42. परमाणुपरममहत्वान्तोऽस्य वशीकारः ।।

Thus meditating, unobstructed, on things - atomic as well as infinite, the yogi's mind attains the stage called "perfectly controlled". 40

43. क्षीणवृत्तेरभिजातस्येव मणेर्ग्रहीतृर्ग्रहणग्राह्येषु तत्स्थतदंजनतासमापत्तिः ।।

The yogi whose tendencies (*vṛttis*) have thus become enfeebled by meditating on the receiver, the receiving (process) and the received (the self, the mind or the external objects), obtains concentratedeness and sameness like a (transparent) crystal (placed before different coloured objects). 41

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44. तत्र शब्दार्थज्ञानविकल्पैः संकीर्णा सवितर्का समापत्तिः ।।

That in which sound, meaning, knowledge and the alternatives thereof are all mixed up is called a *samādhi* accompanied with a ratiocination.

45. स्मृतिपरिशुद्धौ स्वरूपशून्येवार्थमात्रनिर्भासा निर्वितर्का ।।

(The *samadhi* called) without reasoning (comes about) when memory becomes purified or devoid of all impressions and the mind remaining unified with the object or the knowledge-portion of a perception, expresses *that* only (and nothing else). 43

46. एतयैव सविचारा निर्विचारा च सूक्ष्मविषया व्याख्याता ।। सूक्ष्मविषयत्वंचालिंग - पर्य्यवसानम् ।।

It is in this way (that), the (*samadhis* or concentrations) with discrimination and without discrimination whose objects are finer - are explained. 44, 45.

47. श्रुतानुमानप्रज्ञाभ्यामन्यविषया विशेषत्वात् ।।

The knowledge gained from testimony and inference is about common objects. (The knowledge) that (results) from *samadhi* just mentioned (however), is of a higher order, being able to penetrate where inference and testimony cannot go. 49. (ys 3.49)

sadhana pada : means of achievement

48. तपः स्वाध्यायेश्वरप्रणिधानानि क्रियायोगः ।। स समाधि-भावनार्थः - क्लेश-तनू-करणार्थश्च ।।

Penance, self-study and devotion to God constitute the *Kriyayoga* or the means of attaining the objective. This brings forth *samadhi* and minimises the distresses (on the way). 1,2

49. अविद्यास्मितारागद्वेषाभिनिवेशाः क्लेशाः ।।

Ignorance, egoism, attachment, aversion and obsession-these are the distresses.

50. अविद्या क्षेत्रमुत्तरेषां प्रसुप्ततनुविच्छिन्नोदाराणम् ।।

Ignorance is the productive field of all those that follow whether they exist in dormant, attenuated, overpowered or expanded state.

51. अनित्याशुचिदुःखानात्मसु नित्यशुचिसुखात्मख्यातिरविद्या ।।

Ignorance is taking the non-eternal, the impure, the painful and the non-self as the eternal, the pure, the happy and the Atman or the self.

52. दृग्दर्शनशक्त्योरेकात्मतैवास्मिता ।।

Identification of the seer with the instrument of seeing is egoism.

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53. सुखानुशयी रागः ।। दुःखानुशयी द्वेषः ।।

That which dwells on pleasure is attachent. That which dwells on grief is aversion. 7.8 (ys s. 1-8)

54. योगांगानुष्ठानादविशुद्धिक्षये ज्ञानदीप्तिराविवेकख्यातिः ।।

By the practice of the different parts of yoga the impurities being destroyed, knowledge becomes effulgent upto discrimination. 28

(Now come the practical directions. What remains now, is to practice the method of reaching it - Swami Vivekananda)

55. यमनियमासनप्राणायामप्रत्याहार धारणाध्यानसमाधयोऽष्ठावंगानि। अहिंसासत्यास्तेयब्रह्मचर्यापरिग्रहा यमाः। एते जातिदेशकालसमयानवच्छिन्नाः सार्वभौमा महाव्रतं। शौच सन्तोषतपः स्वाध्यायेश्वरप्रणिधानानि नियमाः। वितर्कबाधने प्रतिपक्ष-भावनम्। वितर्का हिंसादयः कृतकारितानुमोदिता लोभक्रोधमोहपूर्वका मृदुमध्याधिमात्रा दुःखज्ञानानन्तफला इति प्रतिपक्षभावनम्। अहिंसाप्रतिष्ठायां तत्सन्निधौ वैरत्यागः। सत्य - प्रतिष्ठायां क्रियाफलाश्रयत्वं। अस्तेयंप्रतिष्ठायां सर्वरत्नोपस्थानं। ब्रह्मचर्यप्रतिष्ठायां वीर्य-लाभः। अपरिग्रहस्थैर्ये जन्मकथन्तासंबोधः। शौचात् स्वांगजुगुप्सा परैरसंसर्गः। सत्वशुद्धिसौमनस्यैकाग्रतेन्द्रियजयात्मदर्शनयोग्यत्वानि। सन्तोपादनुत्तमः सुखलाभः। कायेन्द्रियसिद्धिरशुद्धिक्षयात्तपसः। स्वाध्यायादिप्टदेवतासम्प्रयोगः। समाधिसिद्धिरीश्वरप्रणिधानात्। स्थिरसुखमासनम्। प्रयत्नशैथिल्यानन्त्यसमापत्तिभ्याम्। ततो द्वन्द्वानभिघातः तस्मिन् सति श्वासप्रश्वासयोर्गतिविच्छेदः प्राणायामः। बाह्याभ्यन्तरस्तम्भवृत्तिः देशकालसंख्याभिः परिदृप्टो दीर्घः सूक्ष्मः। बाह्याभ्यन्तरविषयाक्षेपी चतुर्थः। ततः क्षीयते प्रकाशावरणम्। धारणासु योग्यता मनसः। स्वस्वविपयसम्प्रयोगाभावे चित्तस्वरूपानुकार इवेन्द्रियाणां प्रत्याहारः। ततः परमवश्यतेन्द्रियणाम्।

Self restraint (*yama*), compliance (to prescribed rules, *niyama*), (practice of the requisite) posture (*asanas* of the body), control of breath (*pranayama*), drawing the sense organs inward, retention (of this drawn-in-state), contemplation (in this state) and the final state of blissful concentration of all control or *samadhi* are the eight limbs of yoga.

Non-violence, truthfulness, non-stealing, continence, non-acceptance (of gifts, etc.) constitute self-restraint. These are (to be considered as) universally applicable great vows irrespective of the (various factors such as) caste, place, time or the customs (and other such particulars). *(rest, untranstlated)*

Praṇayama is considered lengthy or fine according (to its three parts), the external, the internal and the motionless or holding processes are modified by the regulations of space, time and number.

The fourth is restraining the *prana* by directing it either to external or internal objects.

From that, the covering to the light of the *citta* is attenuated. The mind becomes fit for *dharana* (from that). The drawing in of the sense organs is by giving up their own objects and taking the form of the mind stuff. Thence arises the supreme Control of the mind-stuff (or, the *samadhi*). ys. s. 29-55.

(Among the other *darśanas*, apart from Sankhya and yoga, only two, viz., Reseswara and Nyaya are of some relevance, the former, for its use of mercury for elixirisation and the latter, because it concerns logical argumentation. A few quotations are included here, taken mainly from *Sarva darsana sangraha* by Mādhava).

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d. *reseswara darsana - philosophy of the Lord of the rasa, the mercury*

56. अपरे माहेश्वराः परमेश्वरतादात्म्यवादिनोऽपि पिण्डस्थैर्ये सर्वाभिमता जीवन्मुक्तिः सेत्स्यतीत्यास्थाय पिण्डस्थैर्योपायं पारदादिपदवेदनीयं रसमेव संगिरन्ते।

The other devotees of the God Maheswara, though arguing for the identity (of the self) with the God, maintain (however) that a liberation (from bondages of the world) while alive (in this body itself) that is desired by all, becomes accomplished only when there is a stability of this microcosm of the body (that we live in now,) (and therefore) proclaim that mercury alone is the means of (bringing about such a) stability of this macrocosm of the body; the word *parada* for mercury signifies that it is the giver (*da*) of what lies beyond (the present, *para*) .

57. षड्दर्शनिऽपि मुक्तिस्तु दर्शिता पिण्डपातने।
करामलकवत्सापि प्रत्यक्षा नोपलभ्यते।
तस्मात्तं रक्षयेत्पिण्डं रसैश्चैव रसायनैः ।।
गोविन्दभगवत्पादाचार्यैरपि -
इति धनशरीर भोगान्मत्वानित्यान् सदैव यतनीयम्।
मुक्तौ सा च ज्ञानात्तच्चाभ्यासात्स च स्थिरे देहे।।

Even in all the six *darsanas*, the final liberation is shown to be (one that comes) after the fall (of this) body, (and) even *that* is not obtainable (*by following them*) clearly like the emblic fruit on (your) hand. (It is) therefore that (this) body should be protected (*in this life itself*) by (the use of) mercury and the elixirs or the vitalisers. It has been (told) by Govinda Bhagawat padacarya also that "(knowing well) that money, body and enjoyment are non-eternal, effort should be constantly made to secure the liberation. This latter however is possible only because of the right knowledge and this in turn is (possible) because of constant practice (for which one should note that) a stable body (is inevitable)".

58. षाट्कौशिकस्य शरीरस्यानित्यत्वेऽपि रसाभ्रकपदाभिलप्यहरगौरीसृष्टिजातस्य नित्यत्वोपपत्तेः ।

Even though there is the non-eternality of this body made up of the six sheaths, one can still postulate (*or, rather profess the possibility of*) their constancy because of the presence of mercury and mica (*the other equally extolled minerals*) born as creations of Siva and Paravati.

59. देवदैत्यमुनिमानवादिषु बहवो रससामर्थ्यादिदव्यं देहमाश्रित्य जीवन्मुक्तिमाश्रिताः श्रूयन्ते रसेश्वरसिद्धान्ते -
देवाः केचिन्महेशाद्या दैत्याः काव्यपुरः सराः।
मुनयो वालखिल्याद्या नृपाः सोमेश्वरादयः ।।
गोविन्दभगवत्पादाचार्यो गोविन्दनायकः ।
चर्वटिः कपिलो व्यालिः कापालिः कन्दलायनः ।।
एतेऽन्ये बहवः सिद्धा जीवन्मुक्ताश्चरन्ति हि।
तनुं रसमयीं प्राप्यत तदात्मककथाचणाः ।।

Among the gods, the demons, the sages and man, etc., we hear in the words of Raseswara siddhanta of many who have obtained liberation while alive staying as they do in divine bodies because of the power of mercury.

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Some gods such as Maheswara and the like, demons with Sukracarya in the forefront, sages such as Vālakhilya and the like, kings such as Someswara, Govinda Bhagawatpadacarya (the preceptor of the famous Adi Sankaracarya), Govindanayaka, Carvati, Kapila, Vyāli, Kāpāli, Kandalāyana these and many other accomplished (experts), move about liberated while alive, having obtained mercurial bodies and becoming famed for such stories (of the efficacy of mercury).

60. (For using mercury towards this purpose, 18 specific processings are mentioned, their effect when used also varying, some of them conferring unusual powers such as movement in sky, or *khecari vidya* etc. These are all alchemical processes of transmuting mercury into gold and also using it for medical purposes viz., attaining a diseaseless, effulgent, deathless body. It is likely that Siddha system of medicine in vogue even now in South India reflects this basis).

ते च संस्कारा निरूपिताः
स्वेदन मर्दन मूर्च्छन स्थापन पातन निरोध नियमाश्च दीपन गमन ग्रासप्रमाणमथ जारणविधानम्।।
गर्भद्रुति बाह्यद्रुति क्षारण संराग सारणाश्चैव। क्रामणवैध्यौ भक्षणमष्टादशधेति रसकर्म।। इति।।
तत्प्रपंचस्तु गोविन्द भगवत्पादाचार्य सर्वज्ञ रामेश्वर भट्टारक प्रभृतिभिः प्राचीनैरुचार्यैः निरुपित इति ग्रन्थ भूयस्त्व भयादुदास्यते।

The processings stated (here) are:

swedana (steaming?), *mardana* (pounding), *murchana* (nullification?), *sthapāna* (fixation?), *pātana* (strikings ?), *nirodha* (confinement ?), *niyama* (control ?), *dipana* (excitation ?), *gamana* (mobilisation ?), *grasa pramaṇa* (fixation of the measure of the morsel, to be used), *jarana* vidhi (the methodology of oxidisation), *antara* and *bahya druti* (softening on the inside or the outside), *kṣaraṇa* (calcination ?) *samaraga* (pigmentation ?) *sarana* (stretching out ?), *krāmaṇa* (stepping up?), *vedha* (transmutation) and *bhaksana* (gulping) - the alchemical processes for mercury are thus of eighteen kings.

The fuller details of this however are explained by the ancient *rasacaryas* like *Govindabhagavatpādacārya*, *Sarvagna*, Rameswara, Bhattaraka and so on; hence this is neglected here due to the fear of making the (present) work unwieldly.

(therapeutic value of mercury)

आयतनं विद्यानां मूलं धर्मार्थकाममोक्षाणां। श्रेयः परः किमन्यत् शरीरं अजरामरं विहायैकम्।।
प्रमाणतोऽपि प्रत्यक्षात् यो न जानाति सूतकम्। अनादिविग्रहं देवं कथं ज्ञास्यति चिन्मयम्।।
यज्जरया जर्जरितं कासश्वासादि दुःखवशाप्तम्। योग्यं तन्न समाधौ प्रतिहतबुद्धीन्द्रिय प्रसवम्।।
बालः षोडशवर्षो विषयरसास्वादलंपटः तरतः। जातविवेकवृद्धो मर्त्यः कथमाप्नुयात् मुक्तिम्।।
अस्मिन्नेव शरीरे येषां परमात्मनो न संवेदः। देहत्यागादूर्ध्वं तेषां तद्ब्रह्मदूरतरम्।।

What can there be that is more auspicious apart from (this) body alone (of a person) which is the abode of (all) learnings and the source of religious merit, economic prosperity, personal desire and lust as well as the final emancipation? He who does not know (the therapeutic value of) mercury, the beginningless corporeal embodiment of god, either on evidences or by direct experience, how can he know (the Parabrahma, who is) the very embodiment of knowledge? He who is shattered by old age (and) owned by cough and breathing troubles is unfit for (attaining the state of) samadhi, being a progenitor (as he is, of) stricken down intellect and sensory faculties. A body of sixteen years more or less addicted to the tasting of

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the flavour of the sense objectives, or, an old man about to die in whom the wisdom has just dawned, how can they obtain emancipation? For those who do not get the feeling and sensitivity of the Great God in this body itself, that Brahma becomes still further away after they leave this body (at death). Govindabhagavatpada (preceptor of Adi Sankaracarya), Rasahrdaya tantram.

e. *aulukya or vaisesika darsana*

61. रुपरसगन्धस्पर्शसंख्यापरिमाणपृथक्त्वसंयोगविभागपरत्वापरत्वबुद्धिसुख - दुःखेच्छाद्वेषप्रयत्नाश्च कण्ठोक्ताः सप्तदश, च शब्दसमुच्चिता गुरुत्वद्रवत्व स्नेहसंस्कारादृष्टशब्दाः सप्तैवेत्येवं चतुर्विंशतिर्गुणाः ।

Form, taste, smell, touch: (existence and ascertainabiliy in some specific) number and measure; separatedness (from other entities); combination(with other entities); divisibility (from out of other entities); the otherness or the non-otherness i.e. identity (when compared with other entities); (being responsibile to cause or promote among the creatures, a feeling of) intellectural comprehension, happiness, grief, desire and effort (to secure it) - these as specifically and obviously mentioned, the seventeen, of them; in the word "and" here, are included heaviness, liquidity, unctuousness, (specific) processings (an entity is subjected to), the invisible (viz., the not obviously evident as the rest - these are two viz. *dharma* - the rules in which the entity concerned behaves normally and as per its innate nature and *adharma* - the behaviour of the entity when it deviates from its this *dharma*) and sound - these again, are seven and in this way, (the totality of the qualities recognised in this *Sāstra*) are twenty four.

62. कर्म पंचविधम् उत्क्षेपणापक्षेपणाकुंचनप्रसारणगमन भेदात् ।

The (totality of the) actions i.e. the motions (that entities can display) is of five kinds: upward throw, downward throw, contraction, expansion and just moving about. (Or, in other words, the totality of the motions that any object can describe is only five, like this: viz. upward, downwad, horizontal, towards the centre, of the object or away from the centre and just movement in an indeterminate direction or non-directional movement, as it is called in modern physics).

f. *aksapāda darśana - nyāya sūtra*

63. प्रमाण - प्रमेय - संशय - प्रयोजन - दृष्टान्त - सिद्धान्त - अवयव - तर्क - निर्णय - वाद - जल्प - वितण्डा - हेत्वाभास-च्छल - जाति - निग्रहस्थानानां - तत्वज्ञानान्निःश्रेयसाधिगमः ।

The proof, the provable, the doubt,, the utility, the theory, the components, the logic, the conclusion, the argumentation, the disputation (where the reply given is overbearing and disputable), fallacious controversy (idly carping at the arguments or assertions of another without attempting to prove the opposite side of the question), (employing) fallacious logic, deceiptful argumentation, perverting the sense of the words, a self-confuting reply (founded merely on apparent similarity or dissimilarity), a situation of assailment (of the opponent), - an understanding of the principles (of all these) and the employment of them towards the attainment of final liberation. (*This constitutes the full range of the subjects dealt with in this discipline of Nyāya or "logical or syllogistic argument or inference"; "so called, because it goes into all subjects, physical and metaphysical".* MW)

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64. साधनाश्रयाव्यतिरिक्तत्वे सति प्रमाव्याप्त प्रमाणम्।

Proof is that which gets pervaded by the parameters that are not in opposition to the means (available for) ascertaining an entity or the substratum (in which that entity is situated). (In other words, this is what can be ascertained by the parameters we can devise which neither contradict the means available for us to ascertain this or the situation in which the entity is placed).

65. तच्चतुर्विधं प्रत्यक्षानुमानोपमानशब्द भेदात्।

Proofs are of four kinds: depending on the differences, such as direct perception, inferencial deduction, analogous argument or statements of the authoritative and the trustworthy.

66. प्रमायां यद्धि प्रतिभासते तत्प्रमेयम्। तच्च द्वादशप्रकारम् आत्मशरीरेन्द्रियार्थ बुद्धिमनः प्रवृत्तिदोषप्रेत्यभावफलदुःखापवर्ग भेदात्।

The provable is that which flashes (to us) by the (application of the) parameters (we have devised for the purpose). These are of twelve kinds: because of the differences such as: soul, body, sense organs, sense objects, intellect, mind, predilection (of the body, the speech and the mind), vitiation (that is the cause for pedilection such as passion, hatred and infatuation), the state after-death, the fruit of the actions, grief and final liberation. (This lists the sum total of the entities that need to be understood by adducing the proper proofs or setting adequate parameters).

67. अनवधारणात्मकं ज्ञानं संशयः। स त्रिविधः साधारणधर्मासाधारणधर्म विप्रतिपत्तिलक्षणभेदात्।

(*doubt* :) A knowledge that is not determinative is doubt. This is of three kinds: on the differences such as of general nature, of extraordinary nature and, of the characterstics of contrariety.

68. यमर्थमधिकृत्य प्रवर्तन्ते पुरुषास्तत्प्रयोजनम्। तद् द्विविधं दृष्टादृष्ट भेदात्।

(*utility* :) Motivated by which reason, people commence (an activity) this is utility. This is of two kinds (based) on the differentiations such as being:) visible and invisible.

69. व्याप्तिसंवेदन भूमिर्दृष्टान्तः। स द्विविधः साधार्म्यवैधर्म्य भेदात्।

(illustration:) The basis that signifies (or, makes one understand or feel) the (full) extent (of an entity) is, an illustration. This is of two kinds: (based) on the differentiations (such as:) of the same nature (homologous) or of a different nature (analogous).

70. प्रमाणिकत्वेनाभ्युपगतोऽर्थः सिद्धान्तः। स चतुर्विधः सर्वतन्त्रप्रतितन्त्र अधिकरणाभ्युपगमभेदात्।

(*theory* :) The meaning that has been secured after (all the competent) proof (requisite for the purpose), is theory. This is of four kinds: on the differentiations

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(such as:) applicable to that specific technical treatise (i.e. valid to one specific technical ground under study), substantive (i.e. a syllogism involving other theories, necessarily) and approximative (i.e. an accepted axiom).

71. व्याप्यारोपेण व्यापकारोपस्तर्कः। स चैकादशविधिः। व्याघातात्माश्रयेतरेतराश्रयचक्राश्रयानवस्थाप्रतिबन्धिकल्पनाकल्पनालाघवकल्पनागौरवौत्सर्ग अपवादवैजात्य भेदात्।

(*logical reasoning*:) Assignment of the pervader by the application of the pervasive is logical reasoning. This is of eleven kinds (based) on the differentiations such as: contradictive, self-dependent, mutually dependent, dependent on a cyclical argument, unsettled, inviting counter-productive concepts, (involving) lightness (or frivolity) in conceptualisation, (involving too heavy a) conceptualisation, abandonment and of a totally different class.

72. यथार्थानुभवपर्यायः प्रमितिर्निर्णयः। स चतुर्विधः साक्षात्कृत्यनुमित्युपमितिशाब्द भेदात्।

(*conclusion*:) Determination of all the parameters involved (in a situation) is: conclusion; its other alternative form is: an experience (of the entity) as it exists true (to its own nature). This is of four kinds, on the differentiations, such as: directly observed (by investigation), inferentially deduced, analogously determined and concluded on the basis of the words of the trust-worthy authorities.

73. तत्व निर्णय फलः कथाविशेषो वादः।

(*argumentation*:) The special (type of) conversation whose aimed fruit is (to secure a) conclusion (regarding the) principle of a (situation) is argumentation.

74. उभयसाधनवती विजिगीषु कथा जल्पः।

(*disputation*:) A conversation whose (sole aim is to) win (in the argument) (but is actually) supportive to both sides (of the argument) is a disputation.

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7. Human Constitution

(A speciality of Ayurveda is that it recognises soul or self as an integrated and infact *the* most important reckonable component of man, because death ensues only when soul leaves the body. A statement like this is not a mere figure of speech in Ayurveda but a scientific observation. That is why, soul is dealt with actively and very frequently in this discipline; for instance, the first component commencing the discussion of human constitution by Caraka is this soul. It is such a feature which makes many technical discussion in Ayurveda as being mixed with what we now tend to call philosophy and regard as better kept separate. The business of a physician is however wholly with the body, as Susruta very clearly specifies when he says that in Ayurveda we do not teach about soul; but his viewpoint is: it is nonetheless unscientific to totally forget the component of soul in man. It is this recognition that renders the discussion of the needs and values of realising the soul of oneself and all that is incidental to this paramount goal of every individual person, completely medical and not merely an incidental digression. Modern medicine is appreciating this stand-point in one way when it defines health as a state of positive attitudes and not merely disease-free nature).

a. *some elemental questions.*

1. कतिधा पुरुषो धीमन् ! धातुभेदेन भिद्यते। पुरुषः कारणं कस्मात्, प्रभवः पुरुषस्य कः।
   किमज्ञो ज्ञः, स नित्यः किं किमनित्यो निदर्शितः।
   प्रकृतिः का, विकाराः के, किं लिंगं पुरुषस्य च।।

(i) *Questions* : Learned Sir, into how many types does the human person get differentiated based on his constitutents? Why is he (considered) *the* reason (for all that happens to him) and what is his origin? Is he the ignorant or the knower? Is he indicated (in the Texts) as eternal or non-eternal? What is (his) nature and what are the abnormalities (thereof)? What (exactly) is the characteristic feature of a person? Cs sa. 1.3-4.

(*the characteristics of soul or self*)

2. निष्क्रियं च स्वतन्त्रं च वशिनं सर्वगं विभुम्। वदन्त्यात्मानमात्मज्ञाः क्षेत्रज्ञं साक्षिणं तथा।।

The knowers of Self speak of the Self as being action-less, independent, restrained, omnipresent, lordly, a knower of the field (viz. the body in which it is lodged in a living person) and a (mere) witness (of the actions of the person and not the doer).

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निष्क्रियस्य क्रिया तस्य भगवन् ! विद्यते कथम्। स्वतन्त्रश्चेदनिष्टासु कथं योनिषु जायते।।

How can there be an action, Sir, in this actionless Self? If it is independent (and can thus choose its own fate), why will it get born in undesirable wombs?

वशी यद्यसुखैः कस्मादभावैराक्रम्यते बलात्। सर्वाः सर्वगतत्वाच्च वेदनाः किं न वेत्ति सः।।

If restrained, why will it get compulsively overcome by unhappy feelings? If omnipresent, why will it not know the pain wherever they occur (and thus avoid them)?

ज्ञेयं क्षेत्रं बिना पूर्वं क्षेत्रज्ञो हि न युज्यते। क्षेत्रं च यदि पूर्वं स्यात् क्षेत्रज्ञः स्यादशाश्वतः।।

It is not proper to regard the knower of the field as (being) earlier (in its evolutionary origin) to the field (viz., the body) (for), if the body is earlier, then the knower will be non-eternal.

साक्षिभूतश्च कस्यायं कर्ता ह्यन्यो न विद्यते। स्यात् कथं चाविकारस्य विशेषो वेदनाकृतः।।

If there is no doer other than itself for this (mere) witness, *for what* is he the witness? For a changeless self how can there be a speciality of the pain (which is by definition, a change from normality)?

अथ चार्तस्य भगवंस्तिसृणां कां चिकित्सति। अतीतां वेदनां वैद्यो वर्तमानां भविष्यतीम्।।
भविष्यन्त्या असंप्राप्तिरतीताया अनागमः। सांप्रतिक्या अपि स्थानं नास्त्यतेः संशयो ह्यतः।

Sir, of the three kinds of pains in a patient, which one does the physician treat – the past, the present or the future? There is no obtaining of the future pain (now), there is no coming (back) of the past pain and the present pain is unstable. Therefore, there *is* a concern (as to which pain does the physician actually treat?) Cs. sa. 1.5.12.

3. कारणं वेदनानां किं, किमधिष्ठानमुच्यते। क्व चैता वेदनाः सर्वा निवृत्तिं यान्त्यशेषतः।।
सर्ववित् सर्वसंन्यासी सर्वसंयोगनिःसृतः। एकः प्रशान्तो भूतात्मा कैर्लिंगैरुपलभ्यते।।

What is the reason for the pains and what is their basis? Where do all of these pains get removed completely? By what characteristics can one recognise the omniscient, the all-renouncing, the separate from all attachments, the single and the quiescent self of the individuated person? Cs. sa 1.13-14.

(ii) (*answers to some questions*)
(Into how many types is the person differentiated?)

4. खादयश्चेतनाषष्ठा धातवः पुरुषः स्मृतः। चेतनाधातुरप्येकः स्मृतः पुरुषसंज्ञकः।।
पुनश्च धातुभेदेन चतुर्विंशतिकः स्मृतः। मनो दशेन्द्रियाण्यर्थाः प्रकृतिश्चाष्ट धातुकी।।

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Five priomordial elements commencing from the sky onwards and the sixth, viz., the animation or consciousness (these together) are cosidered to be (i.e. to form) the person. (Sometimes), the constituent of consciousness alone is regarded as the person. And again, the person is considered to be of twenty four different constituents (together): the mind, the ten sense organs (five, motor and five, sensory), the five meanings of the senses (sound, touch, form, taste, smell) and the nature of the eight constitutents (in turn, viz., the unmanifest, the great, the ego, the sky, the air, the fire, the water and the earth). Cs. sa. 1.16,17.

(the individual human person (*puruṣa*) a - definition)

5. बुद्धीन्द्रियमनोऽर्थानां विद्याद्योगधरं परम्। चतुर्विंशतिको ह्येषराशिः पुरुषसंज्ञकः।।

The combination of intellect, the sensory organs, the mind and the meanings (of the sensors) is (something) superb. It is this heap which in fact is made up of the twenty four (principles) that is designated as the (operative) person (karma purusa).

रजस्तमोभ्यां युक्तस्य संयोगोऽयमनन्तवान्
ताभ्यां निराकृताभ्यां तु सत्ववृद्ध्या निवर्तते।।

The (further possible) combination of this (operative person) as he gets associated with *rajas* (passion and attachment) and *tamas* (dullness and perplexity) are endless. If he is freed from these two, he will get the final libeation, because of the augmentation of the (quality of) *satva* (the factor of reality, which is the true nature of man, both *rajas* and *tamas* being just deviants).

अत्र कर्म फलं चात्र ज्ञानं चात्र प्रतिष्ठितम्। अत्र मोहः सुखं दुःखं जीवितं मरणं स्वता।।
एवं यो वेद तत्वेन स वेद प्रलयोदयौ। पारम्पर्यं चिकित्सां च ज्ञातव्यं यच्च किंचन।।

It is here (in this operative person) that action and the fruit thereof reside, as well as the knowledge, the infatuation, the happiness, the unhappiness, the living and the dying (and) the feeling of one's ownness. He who knows thus in principle, he (alone) knows the final desolution and the beiginning, the sequilae, the medical treatment and whatever that is there to be known. Cs. sa. 1.35-38.

(Why is the person, including his self, the reason for his activities?)

6. भास्तमः सत्यमनृतं वेदाः कर्म शुभाशुभम्। न स्युः कर्ता च बोद्धा च पुरुषो न भवेद्यदि।। नाश्रयो न सुखं नार्तिर्न गतिनगितिर्न वाक्। न विज्ञानं न शास्त्राणि न जन्म मरणं न च।। न बन्धो न च मोक्षः स्यात् पुरुषो न भवेद्यदि। कारणं पुरुषस्तस्मात् कारणज्ञैरुदाहृतः।।

Illumination and delusion, truth and untruth, the vedas, the good and the bad works-none of these would be there if there is no person who is the doer and the understander (of all these). There will be no resort, no happiness, no going away or coming in, no speech, no science, no technical treatises, no birth or death, no bondage or liberation if there is no person (who is the major agent in all this). Therefore, it is that by those who know what is the reason for things (to come about) is advanced (the argument) that it is the person who is the *raison d'etre* (here).

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न चेत् कारणमात्मा स्यादभादादयः स्युरहेतुकाः । न चैषु संभवेत् ज्ञानं न च तैः स्यात् प्रयोजनम् ।।

If it is not considered that the individual's self is the prime-mover, his constitutent elements, such as Sky and the others will be rendered purposeless. For, there is no arising of knowledge in these latter, nor there is any utility for knowledge to them.

He who will say that a pot is prepared by the mud and the wheel, but without the potter, that a house is prepared by mud, hay and wood, but without a mason - *he* would say that the human body is created by merely the instrumentalities (of the body, the sense organs, etc.), (but) without (involving the) doer (who is the self or the soul, the *raison d'etre*). He does say so because of his (sheer) ignorance and is (actually) kept apart from either the cogency of reasoning or traditional knowledge (in his such a postulation). Cs. sa. 1. 39-44.

7. (what is the reason for the pains?)

धीधृतिस्मृतिविभ्रंशः संप्राप्तिः कालकर्मणाम् । असात्म्यार्थागमश्चेति ज्ञातव्या दुःखहेतवः ।।

Deviation in (the person's) intellect, will or resoluteness and memory; the attainment of time and the actions (conducive to the onset or) the coming in of the non-homologous implications (in his activities) - these are to be known as the causes for the (onset of) grief.

8. विषमाभिनिवेशो यो नित्यानित्ये हिताहिते । ज्ञेयः स बुद्धिविभ्रंशः समं बुद्धिर्हि पश्यति ।।

A contradictory intentness on what is eternal and transitory or what is wholesome and unwholesome - *that* should be known as a deviation in intellect. (For,) intellect sees (viz. discerns) what is even (and not deviant).

9. विषयप्रवणं सत्वं धृतिभ्रंशान्न शक्यते । नियन्तुमहितादर्थाद्धृतिर्हि नियमात्मिका ।।

If there is a deviation of will it is not possible to restrain the mind as it incliness towards (indulgence in) the sense objects from going astray to what is unwholesome. (For,) will is what is contributory to regulation. Cs. sa. 1.98-100.

b. *composition and attitudes*

(i) *composition and metabolic changes*

10. 'पुरुषोऽयं लोकसंमितः' इत्युवाच भगवान् पुनर्वसुरात्रेयः । यावन्तो हि लोके (मूर्तिमन्तो) भावविशेषास्तावन्तः पुरुषे, यावन्तः पुरुषे तावन्तो लोके ; इत्येवंवादिनं भगवन्तम् आत्रेयमग्निवेश उवाच- नैतावता वाक्येनोक्तं वाक्यार्थमवगाहामहे, भगवता बुद्ध्या भूयस्तरमतोऽनुव्याख्यायमानं शुश्रूषामह इति ।।

"This individual human being (which is the subject matter for the science of medicine) is exactly of the same measure (in its composition) as that of the world outside (viz., there is nothing new here and what is not found elsewhere in the world). Whatever (number of) corporalisations of the specialities of states occur in the external world, those many do occur in the (human) person; and, whatever are there in the person, that many, in the world". To revered Atreya who was arguing

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thus, Agnivesa told "I do not understand the meaning of your sentence if you speak thus. Lord, I desire therefore to listen as you speak in greater detail in this matter" Cs. sa. 5.3.

11. अपरिसंख्येया लोकावयवविशेषाः, पुरुषावयवविशेषा अप्यपरिसंख्येयाः ; तेषां यथास्थूल कतिचिद्भावान् सामान्यमभिप्रेत्योदाहरिष्यामः तानेकमना निबोध सम्यगुपवर्ण्यमानानग्निवेश ! षड्धातवः समुदिताः 'पुरुष' इति शब्दं लभन्ते ; तद्यथा - पृथिव्यापस्तेजो वायुराकाशं ब्रह्म चाव्यक्तमिति, एत एव च षड्धातवः समुदिताः 'पुरुष' इति शब्दं लभन्ते।।

The specialities of the component members of the world are uncountable; (similarly) the specialities of the component members of the human person are (also) uncountable. Of them, we shall illustrate some of the conditions, grossly and (with an) intent on bringing out (only) the (underlying) generalities. Listen to them Agnivesa as I describe them in totality. Six elements, gathered together, secure the name of 'person'; this is as follows: earth, water,, energy, air, space, and the unmanifest *brahma*, these six elemens only gathered together, attain the name of 'person'. Cs. sa. 5.4.

12. तस्य पुरुषस्य पृथिवी मूर्तिः आपः क्लेदः, तेजोऽभिसन्तापः, वायुः प्राणः, वियत् सुपिराणि, ब्रह्म अन्तरात्मा।।

Of this 'person', the earth is the corporeal figure (in him); water, the wetness; energy, the heating up; air, the life; space, the hollow; *brahma*, the inner soul. Cs. sa. 5.5.

तस्य हेतुः, उत्पत्तिः, वृद्धिः, उपप्लवः, वियोगश्च। तत्र हेतुरुत्पत्तिकारणं, उत्पत्तिर्जन्म, वृद्धिराप्यायनम्, उपप्लवो दुःखागमः, षड्धातुविभागो वियोगः स जीवापगमः स प्राणनिरोधः स भंगः स लोकस्वभावः। तस्य मूलं सर्वोपप्लवानां च प्रवृत्तिः, निवृत्तिरुपगमः। प्रवृर्त्तिर्दुःखं, निवृत्तिः सुखमिति यज्ज्ञानमुत्पद्यते तत् सत्यम्।।

For this 'person' there is a cause, a growth, an affliction and a separation. Cause is the reason of its origin; origin, the birth. Growth is the satiation and thriving. Affliction is the coming in of grief. Division of the six elements (composing the body) is the separation of the disjunction - this is the going away of life or the obstruction of life, the (final) rupture - this is natural to the world. For all the affliction, the root is the active life (as opposed to contemplative life and defined as consisting of (i) the wish to act, (ii) the knowledge of the means of action and (iii) the accomplishment of the object. MW. Contemplative devotion is the cessation from action. That knowledge which arises that a life of ceaseless activity is unhappiness while (an attitude of) contemplative devotion is happiness is *the* truth. Cs. sa. 5.8.

13. शरीरविचयः शरीरोपकारार्थमिष्यते। ज्ञात्वा हि शरीरतत्वं शरीरोपकारकरेषु भावेषु ज्ञानमुत्पद्यते। तस्माच्छरीरविचयं प्रशंसन्ति कुशलाः।।

An investigation into the body is desired to (enable one to) confer benefit to the body. Once the principle of the body is learnt, a knowledge of the states that would be benefical to the body would come about. That is why, the exports extol the investigation into the body (and the lessons one gets thereby). Cs. sa. 6.3 (*need for the theory of structure, for therapeusis*)

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14. तत्र शरीरं नाम चेतनाधिष्ठानभूतं पंचमहाभूतविकारसमुदायात्मकं समयोगवाहि। यदा ह्यस्मिन् शरीरे धातवो वैषम्यमापद्यन्ते तदा क्लेशं विनाशं वा प्राप्नोति। वैषम्यगमनं हि पुनर्धातूनां वृद्धिह्रासगमनकात्स्न्र्येन प्रकृत्या च।।

Therein, by body is meant the residence of consciousness, (and, this is) constituted by a community of modifications of the five primordial elements. (This is) a bearer of an equable combination (of the three vitiators, the seven body constituents and the impurities). When in this body, the constituents attain an unequality, then, (it) will secure either distress or destruction. Attainment of unequality indeed is (due to) increase, decline and movement of the body constituents, (as it takes place) in its entirety and due to natural cause. Cs. sa. 6.4. – (*a notion of metabolism*).

15. यौगपद्येन तु विरोधिनां धातूनां वृद्धिह्रासौ भवतः।
यदि यस्य धातोर्वृद्धिकरं तत्ततो विपरीत गुणस्य धातोः प्रत्यवायकरं संपद्यते।

Increase and decline of antagonistic constituents come about simultaneously. When for instance, an agent (acts as a causative to) increase a particular constituent, that will itself secure a decline in its antagonistic constituent.

तदेव तस्माद्भेषजं सम्यगवचार्यमाणं युगपन्न्यूनातिरिक्तानां धातूनां साम्यकरं भवति। अधिकमपकर्षति न्यूनमाप्यायति।

That is why the same drug properly adminstered becomes simultaneously an equaliser of the deficient and the exessive constituents; it will attract away what is in excess and (simultaneously) augment the deficient. Cs. sa. 6.5.6.

एतावदेव हि भैषज्य प्रयोगे फलमिष्टं स्वस्थवृत्तानुष्ठाने च यावद्धातूनां साम्यं स्यात्।

This is all that is desired as the fruit (to be obtained) in the application of a drug as well as in the practising of a state of health as long as there exists an equality among the constituents (in the body).

स्वस्था ह्यपि धातूनां साम्यानुग्रहार्थमेव कुशला रसगुणानाहारविकारांश्च पर्यायेणेच्छन्त्युपयोक्तुं सात्म्य समाज्ञातान्; एक प्रकार भूयिष्ठाश्चोपजानाः तद्विपरीतकरसमाज्ञातया चेष्टया सममिच्छन्ति कर्तुम्।

Even the experts and the healthy desire to utilise (diverse) qualities of the *rasa* and the varieties of food in several alternatives after knowing the particularities of their homologations fully and in such a way as to secure only an equality among the constituents. Those who utilise only one type of *rasa* excessively desire to make it balanced by (the application of) a contrary and a fully known agent or behaviour. Cs. sa. 6.7 – (principles of therapeusis).

16. देशकालात्मगुणविपरीतानां हि कर्मणामाहारविकाराणां च क्रियोपयोगः सम्यक्, सर्वातियोगसन्धारणम्, असन्धारणमुदीर्णानां च गतिमतां, साहसानां च वर्जनं स्वस्थवृत्तमेतावद्धातूनां साम्यानुग्रहार्थमुपदिश्यते।।

A proper application of the activties concerning the behaviour and the varieties of food counteracting the region, the time and one's own qualities; a restraining of

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all things that are in excess; a non-restraining of the natural urges that have come up and are actually on the move; and, a giving up of adventurism this is all that is being taught as conferring an equalbility of the constituents (and conducive) for a state of health. Cs. sa. 6.8.

17. तत्रेमे शरीरधातुगुणाः संख्यासामर्थ्यकराः; तद्यथा - गुरुलघुशीतोष्णस्निग्धरूक्ष मन्दतीक्ष्णस्थिरसरमृद्-कठिनविशदपिच्छिलश्लक्ष्णखरसूक्ष्मस्थूलसान्द्रद्रवाः। तेषु ये गुरवस्ते गुरुभिराहारविकारगुणैरभ्यस्यमानैराप्याय्यन्ते, लघवश्च ह्रसन्ति ; लघवः तु लघुभिराप्याय्यन्ते, गुरवश्च ह्रसन्ति। एवमेव सर्वधातुगुणानां सामान्ययोगाद् वृद्धिः, विपर्ययाद्ह्रासः। तस्मान्मांसमाप्याय्यते मांसेन भूयस्तरमन्येभ्यः शरीर - धातुभ्यः, तथा लोहितं लोहितेन, मेदा मेदसा, वसा वसया, अस्थि तरुणास्न्था, मज्जा मज्ज्ञा, शुक्रं शुक्रेण, गर्भस्त्वामगर्भेण।।

Therein, these are the qualities of the constituents of the body that are capable of determining the number (of the possible formulations); heavy-light, cold-hot, unctuous-dry, slow-quick, stable-fickle, soft-hard, clear-slimy, slippery-rough, subtle-gross, dense-fluidy. Among these, if what is heavy is assailed with the varieties of food that are heavy, it will get augmened; (using of) of light (type) will reduce (it). (Similarly,) the light will get augmented by the light, (while) the heavy would reduce it. It is in such manner only there is an increase of the qualities of all constituents of the body by an application of what is similar and a decrease by (using of) the opposite. Therefore, flesh will augment flesh in a way greater than what all other constituents can do; similarly, blood (gets augmented) by blood, fat by fat, grease by grease, bone by tender bone (cartilage ?), marrow by marrow, semen by semen and foetus by raw womb i.e. egg. Cs. sa. 6.10 (*principles of therapeusis*).

18. कात्स्न्र्येन शरीरवृद्धिकरास्त्विमे भावा भवन्ति। तथा- कालयोगः, स्वभाव संसिद्धिः, आहारसौष्ठवमु, अविघातश्चेति।।

The factors (lit. states) that would increase the body are the following in their entirety : the factor of time (such as the time of day, the season and the age), natural accomplishment, nicety of the food and accidents and injuries. Cs. sa. 6.12

19. बलवृद्धिकरास्त्विमे भावा भवन्ति। तद्यथा-बलवत्पुरुषे देशे जन्म बलवत्पुरुषे काले च, सुखश्च कालयोगः, बीजक्षेत्रगुणसंपच्च, आहारसंपच्च, शरीरसंपच्च, सात्म्य संपच्च, सत्वसंपच्च, स्वभावसंसिद्धिश्च, यौवनं च, कर्म च, संहर्षश्चेति।।

The factors (lit. states) that would increase the strength are the following: such as: birth in a place where people are strong by birth itself or in the lineage of (lit. to) a strong person (strong by heredity), or, in a strong time (when by nature, there is an increase in body strength e.g. spring); excellence of the paternal (lit. *bīja,* seed) and the maternal (lit. the *kṣetra,* the field) factors; excellence of the food; excellence of the body; excellence of homologation or compatibility; excellence of the mind; accomplishment by the very nature; youth; activity; and a sense of joy. Cs. sa. 6.13 - (*principles of therapeusis*)

20. आहारपरिणामकरास्त्विमे भावा भवन्ति। तद्यथा-ऊष्मा, वायुः, क्लेदः, स्नेहः, कालः, समयोगश्चेति।।

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The following are the factors (lit. states) in the food that are conducive to effect (digestive ?) changes (in it): heat, (conducive) neuromuscular factor (*vāyu* operating on it), wetness, unctuousness, time and equability of the (various) factors concerned. Cs. sa. 6.14

21. तत्र तु खल्वेषामूष्मादीनामाहारपरिणामकराणां, भावानामिमे कर्मविशेषा भवन्ति। तद्यथा- ऊष्मा पचति, वायुरपकर्षति, क्लेदः शैथिल्यमापादयति, स्नेहो मार्दवं जनयति, कालः पर्याप्तिमभिनिर्वर्तयति, समयोगस्त्वेषां परिणामधातु साम्यकरः संपद्यते।।

Therein, the specialities (of the action) of these factors (lit. states) that bring about digestive effects such as heat and the like are the following : heat cooks; *vayu* extracts; wetness confers a looseness; unctuousness generates a softness; time brings about a (point of) saturatedness; and equability among these (same) factors bestows a balance among the effected constituents. Cs. sa. 6. 15

22. शरीरगुणाः पुनर्द्विविधाः संग्रहेण-मलभूताः प्रसादभूताश्च। तत्र मलभूतास्ते ये शरीरस्याबाधकराः स्युः। तद्यथा-शरीरच्छिद्रेषूपदेहाः पृथग्जन्मानो बर्हिमुखाः, परिपक्वाश्च धातवः, प्रकुपिताश्च वातपित्तश्लेष्माणः, ये चान्येऽपि केचित् शरीरे तिष्ठन्तो भावाः शरीरस्योपघातायोपपद्यन्ते, सर्वांस्तान्मले संचक्ष्महे; इतरांस्तु प्रसादे, गुर्वादींश्च द्रवान्तान् गुणभेदेन, रसादींश्च शुक्रान्तान् द्रव्यभेदेन।।

The qualities of the body are of two kinds in brief; what is due to impurities and what is due to beneficiaries. The impurity-effected are those that cause distress to the body; such as the besmearings (that get collected) at the crevices of the body; (these) are born severally and separately and are (actually) on their way out; the constituents that are burnt out viz., decomposed (e.g. pus); the provoked vitiators *vāta, pitta* and *kapha* and whatever other factors that exist in the body and commence to cause injury to the body - all of them are regarded as coming under (the category of the) impurity-effected. The others however are under (the category of the) beneficiary - (their further differentiation is as per their) variations in quality - ranging from heavyness to fluidity ; in material - raging from rasa to semen. Cs. sa. 6. 17 - (*a notion regards metabolism and its relevance to therapy*)

23. शरीरं सर्वथा सर्वं सर्वदा वेद यो भिषक्। आयुर्वेद स कात्स्न्र्येन वेद लोकसुखप्रदम्।।

That physician who understands the whole of the body in all ways and all the while - he knows the science of Ayurveda in its entirety - the science that is the bestower of happiness to the whole world. Cs. sa. 6.19.

(ii) *the two modes of human life : worldly attachment or, detachment - attitudes - ethics of life*

24. अथाग्निवेश उवाच-किंमूला भगवन्! प्रवृत्तिः, निवृत्तौ च क उपाय इति।।

What is the source, Revered sir, for a life of the world and that of a disengagement from such a life. What is the strategy (involved in either ?) Cs. sa. 5.9

25. भगवानुवाच- मोहेच्छाद्वेषकर्ममूला प्रवृत्तिः। तज्जा ह्यहंकारसंगासंशयाभिसंप्लवाभ्यवपातविप्रत्यायाविशेषानुपायास्तरुणमिव द्रुममतिविपुलशाखास्तरवोऽभिभूय पुरुषमवतत्यैवोत्तिष्ठन्तेः यैरभिभूतो न सत्तामतिवर्तते।

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Infatuation, desire, and hatred constitute the source of a worldly life. Thence arise indeed egoism, attachment, doubt, overflowing engagement, running after (the activities lit. flying near, to engage onself with an activity), lack of faith, non-distinction, non-speciality and the absence of expediencies. (These) stand over that person suppressing him as it were just as a tree of extensively ample branches that would dominate and overpower a young tree (nearby). (Once) conquered by (them), he cannot cross (the limitation of his) mind (that he has acquired by these after-effects of his own engagement in a worldly life).

तत्रैवंजातिरुपवित्तवृत्तबुद्धिशीलविद्याभिजनवयोवीर्यप्रभावसंपन्नोऽहम् इत्यहंकारः ।

Therein, "I am endowed with the possession of this particular type of caste, beauty, wealth, profession, intellect, character, learning, standing or status in the society, or noble descent, age, power and influence"-a feeling of this nature is egoism.

यन्मनोवाक्कायकर्म नापवर्गाय स संगः ।

Whatever activity is there, of the mind, the speech or the body that do not lead (finally) towards emancipation and the final beatitude, is attachment.

कर्मफलमोक्षपुरुषप्रेत्यभावादयः सन्ति वा नेति संश : ।

Whether there do exist (what these people say as) the fruit of one's *karma* (viz. the actions and the results thereof which the doer has to necessarily experience), final emancipation, rebirth of a person after death and so on, or, not - this is doubt.

सर्वावस्थास्वनन्योऽहमहं स्रष्टा स्वभावसंसिद्धोऽहमहं शरीरेन्द्रियबुद्धि स्मृतिविशेषराशिरिति ग्रहणमभिसंप्लवः ।

In all situations, "I am an unique individuality, I am the creator, I am an accomplished person by my very nature, I am a special embodiment of the (prowess of) body, sense faculties, intellectual capacities, and retentiive ability - a conviction like this is the overflowing engagement (in wordly life).

मम मातृपितृभ्रातृदारापत्यबन्धुमित्र भृत्यगणो गणस्य चाहमित्यभ्यवतापः, कार्याकार्यहिताहितशुभाशुभेषु विपरीताभिनिवेशो विप्रत्ययः ।

Of mine is this group of mother, father, brothers, wife, children, relatives, friends and servants and I am (a member) of this group - this is running after (the activities of this worldly life). Excessive adherence in work and no work, the wholesome and the unwholesome, the good and the bad - this is non-distinction (viz. to lose a sense of propriety, discriminativeness and perspective).

ज्ञाज्ञयोः प्रकृतिविकारयोः प्रवृत्तिनिवृत्योश्च सामान्यदर्शनविशेषः ।

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To see both knowledge and ignorance, normalcy and abnormality, (a life of) engagement and (a life of) disengagement, as ordinary and nothing special – this is (an atitude of) non-speciality (i.e. to consider there is nothing special in any of these distinctive attitudes and modes of life, viz, to be cynical in life).

प्रोक्षणानशनाग्निहोत्रात्रिषवणाभ्युक्षणावाहनयाजनयजनयाचनसलिलहुताशन प्रवेशादयः सम्भारम्भाः प्रोच्यन्ते ह्यनुपायाः।

Sprinkling water at the sacrifices, religious fastings, making oblations in fire morning and evening, taking bath three times a day, sprinkling (the objects) with water made sacred with incantations, invoking gods (to stay in an idol, etc.), doing sacrifices, getting sacrifices done, prayer, entering into water and fire – these are the expediencies (that one can adopt to secure a sense of peace and security but not available to a person of this cynical type).

एवमयमधी धृतिस्मृतिरहकांराभिनिविष्टः सक्तः ससंशयोऽभिसंप्लुत बुद्धिरभ्यवपतितोऽन्यथादृष्टिरविशेषग्राही विमार्गगतिर्निवासवृक्षः सत्वशरीरदोषमूलानां सर्वदुःखानां भवति। एवमहंकारादिभिर्दोषैः भ्राम्यमाणो नातिवर्तते प्रवृत्तिं, सा च मूलमघस्य।

In this way, overpowered with absence of intellect, fortitude and retentivity as well as egoism, (and) fully attached (to his own multifarious engagements) he becomes an abiding tree, as it were with the roots of (all) blemishes in (his own) mind, body and vitiators (*vata, kapha and pitta*) and the griefs of all kinds. (He) becomes full of doubts (and has) a mentality of an overflowing engagement and a running after (of all sorts of things); he (innately) views things in a deviant way and does not find anything special anywhere viz., he is cynical, and goes always in an out of the way and a crooked manner. Being turned round and round by the blemishes of egoism and the like thus, he will not cross the boundaries of his own engagements (in the worldly life, as he has himself made it out). This is the source of sin. Cs. sa. 5.10.

26 निवृत्तिरपवर्गः; तत् परं प्रशान्तं तत्तदक्षरं तद्ब्रहम स मोक्षः।।

Disengagement in worldly life is emancipation. That is the supreme peace, it is that that is non-perishable; *that* is Brhma and *that*, the emancipation. Cs.sa. 5.11

तत्र मुमुक्षूणामुदयनानि व्याख्यास्यामः। तत्र लोकदोषदर्शिनो मुमुक्षोरादित एवाचार्याभिगमनं तस्योपदेशानुष्ठानम्, अग्नेरेवोपचर्या, धर्मशास्त्रानुगमनं, तदर्थावबोधः तेनावप्टम्भः, तत्र यथोक्ताः क्रियाः, सतामुपासनम् असतां परिवर्जनम्, असंगतिर्दुर्जनेन सत्यं सर्वभूतहितमपरुषमनतिकाले परीक्ष्य वचनं, सर्वप्राणिषु चात्मनीवावेक्षा, तन्द्रानिद्रालस्यादिकर्मवर्जनं, इन्द्रियार्थेष्वनुरागोपतापनिग्रहः, एषमार्गोऽपवर्गाय, अतोऽन्यथा बध्यते।

Therein, we shall comment upon the means of redumption for those that desire emancipation. He who desires to secure emancipation should first of all go to a preceptor, after seeing the blemishes in the world, practice what the latter says; attend upon the sacred fire; follow the treatises of *Dharma*, understand the meanings thereof, hold on to them, do the acts as told therein; serve the gentle and the good, abandon those that are not gentle and good, have no association with the wicked; speak what is true after fully examining what is wholesome to all

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concerned, not harsh and do so not when the time (appropriate for speaking) has passed away; have an outlook on all people as one has on oneself ; abandon the sense of stupor, sleep, laziness and the like in (one's) activities ; refrain in the attachments and irritations of the senses, this is the path of emancipation. (With) a path other than this, he will get bound down (to worldly life). Cs. sa. 5.12.

27. एतैरविमलं सत्वं शुद्धयुपायैर्विशुध्यति। मृज्यमान इवादर्शस्तैलचेलकचादिभिः ।।
ग्रहाम्बुद रजोधूमनीहारैरसमावृतम्। यथाऽर्कमण्डलं भाति भाति सत्वं तथाऽमलम्।।
ज्वलत्यात्मनि संरुद्धं तत् सत्वं संवृतायने। शुद्धः स्थिरः प्रसन्नार्चिर्दीपो दीपाशये यथा।।

By these means, the unclear mind becomes clear like a mirror getting rubbed by oil, a piece of cloth and a brush. As the orb of the sun shines forth (when) not covered with clouds, dust, smoke or mist, so does a clean mind shine. Such a mind rooted in (its realisation of) soul glows like a steady and clear lamp within a clear cover. Cs. sa. 5.13-15.

28. लोके विततमात्मानं लोकं चात्मनि पश्यतः। परावरदृशः शान्तिर्ज्ञानमूला न नश्यति।।

One who sees the distant and the near, the highest and the lowest and finds himself spread everywhere in the world and the whole world within himself - the peace of such a person is never destroyed - as it lies rooted in his such a knowledge. Cs. sa. 5.20

c. *congenital variability*

29. समपित्तानिलकफाः केचिद्गर्भादि मानवाः। दृश्यन्ते वातलाः केचित् पित्तलाः श्लेष्मलास्तथा।।
तेषामनातुराः पूर्वे वातलाद्याः सदाऽऽतुराः। दोषानुशयिता ह्येषां देहप्रकृतिरुच्यते।।

Some persons are evenly balanced in their *pitta, vata* and *kapha,* from the womb itself (i.e. from their very birth); (while) some are found to be *vatic,* others *pittic* and yet others *kaphaic* (congenitally, similarly). Among these, the first are constitutionally healthy, but (the others i.e.) the *vātic,* and (so on viz. where one vitiation dominates over the others) are always prone to get a disease. For them, there is an inborn tendency to become susceptible for diseases. Their (particular) body constitution is named after the predominant dosa. Cs. su. 7. 39, 40.

30. The constitution due to the sperm and the ova, the factor of time and the uterus, the food and the pastimes of the mother and the changes of the primordial elements - these depend upon the (happenings in the) intrauterine body of the foetus. By whatever vitiations are these accompanied to a greater or an even degree, it is by these vitations that the foetus gets influenced. These respective constitutions are then said to get formed for the persons, congenitally viz., from the womb onwards. Therefore some get a *śleṣmic* constitution, others, *vātic,* yet others *pittic* while some have an evenly balanced constituents.

31. सप्तप्रकृतयो भवन्ति-दोषैः पृथक्, द्विशः, समस्तैश्च।
शुक्रशोणितसंयोगे यो भवेद्दोष उत्कटः। प्रकृतिर्जायते तेन तस्या मे लक्षणं शृणु।।

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There are seven types of constitutions - by (a predominance of) one of the three dosas, (3), a (predominance of) only two (of the three dosas, (3) and an (only) even balancing of all of the *dosas*. Whatever vitiation is overpowering at the time of the union of sperm and the egg, the constitution arises because of that. Listen to the characteristics thereof. Sc. sa. 4. 62, 63.

32. (*clinical overtones of congenital variability:*)

विपरीतगुणस्तेषां स्वस्थवृत्तेर्विधिर्हितः । समसर्वरसं सात्म्यं समधातोः प्रशास्यते ।।

Those who have some vitiation overpowering others are advised to take those (substances and measures) that are contrary to their own dominant vitiation. For those that have evenly balanced constitution, a balancing of all the types of *rasas* and homologising of equable constituents to themselves is best. Cs. su. 7.41.

33. शुक्रार्तवस्थै र्दोषैर्गर्भस्यादौ जन्म भवति, तथा च तैस्तिस्रः प्रकृतयो भवन्ति। वातप्रकृतिः पित्त प्रकृतिः कफप्रकृतिरिति, तासु वात प्रकृतिर्हीना पित्तप्रकृतिर्मध्या कफप्रकृतिश्चोत्तमा भवति। द्विदोषजाः प्रकुतयो निन्द्य। समधातु प्रकृतिः सर्वासु श्रेष्ठा भवति।

(Natural constitution of the body) is the nature of the body as constituted by the (three) vitiations. Birth of the foetus occurs in the beginning by the vitiations situated in the semen and the oestrum - as *vata* nature, *pitta* nature, and *kapha* nature. Of these, *vata* nature is the worst, *pitta* nature, medium and *kapha* nature, the best. A nature due to two vitiations is despisable and a nature of balanced body constituents is the best among all. Ah. su. 1.9-10

34. यतः प्रकृतिश्च आरोग्यम् आरोग्यार्था च भेषज प्रवृत्तिः ।

What is natural is health. The endeavours of physicians is for the sake of (securing and maintaining) health. Cs. vi. 6. 13

d. *constitutional medicine and somatotypes*

(Somatotypes are certain clearly recognisable somatic norms in man and are essentially congenital. Their detailed specifications on general build, psycholigical tendencies, disease proneness, etc. are given by many authors: for e.g. Caraka, Susruta, Vagbhata and Varahamihira. These are considered to be of medical value for the physician to determine the therapeutic procedure he has to adopt to suit the person's constitution. This is referred nowadays as Constitutional medicine).

(i) *somatotypes for prognosis - from Susruta*

35. नानादेशस्वभावा ये नानाहारास्तथैव च। नानाचारा नैकसत्वा धर्मिणो अधर्मिणस्तथा।। तेषां सात्म्यं च सत्वं च ऋतुकालं च लक्षयेत्। भैषज्यं तु ततः कुर्याद्देहं विज्ञाय देहिनाम्।। यस्य देशस्य यत्सात्म्यं यच्चास्य चरितं भवेत्। तेन भेषजसंयुक्तं भैषज्यमुपकल्पयेत्।। आरोग्यं तेन वर्णौजो बलं वीर्यं च जायते। वर्जनादृतुसात्म्यानां कृशो नित्यं सुदुर्बलः।। नित्यं रोगाभिभूतश्च पुमान् सात्म्यविवर्जनात्। तस्मात् सात्म्यं निषेवेत ह्यसात्म्यं परिवर्जयेत्।।

(The patients that come to a physician) are of different countries and different natures. Their food habits are also different and their customs are diverse and they

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do not all have a similar mentality or the essence. Some (among them) follow the rules of *dharma* and some do not. (The physician) should perceive their compatibilities and homologations, mental essence and the seasonal factors involved, and, then carry out the medication after fully knowing (the factors of) the physical constitution (of the patients). (He) should formulate a medication which combines such a medicine that suits him (the patient) in accordance with that which is compatible and homologous to the country from where he comes and that which is suitable to his customs and habits. It is by such a medicine that the health, the complexion, the vitality, the strength and the potency of the patient come about. By disregardiing the seasonal compatibilities, (he) becomes emaciated and constantly very weak. By giving up consideration of the (factor of) homologation (the person of the patient becomes) constantly disease-stricken. Therefore, it is that the physician should take recourse to (the factor of) homologation and give up what is non-homologous. Da. Ss. su. 6.36

(This section is almost wholly new to readers in modern Medicine. Here, Susruta instructs the physician to determine the prognosis of the patient himself first, by deciding whether the latter has any remaining span of life left or not. He proceeds to offer easily recognisable physical criteria for it. In view of the very detailedness of the information provided, this section will prove to be of interest to modern anthropometric studies even. For instance, to determine the dimensions of a healthy body of the times of Susruta, an interesting method of measurement is used. An inch or *angula* (literally, a finger) is defined as the distance between two adjascent knuckles on the fingers on the palm side. But, instead of treating this as a standard measure of universal value (as when we say nowadays that one inch is 2.5 cm), Susruta measures the body of a person in terms of this distance in the person's own hand, whether child, man or woman. This is somewhat ingenuous also., For , the value given will remain the same then, whether the person is well grown or not and irrespective of his age. Instead of using this *relative* measurement, if he had given any standard measurement, this would not have been the case. More strikingly, the very elaborateness of the information here leads us to wonder, if all this had not been the result of a statistically large number of measurements. Moreover, the proportions given, are complete, thorought and graphic. Whatever reckonable points exist on the surface of the human body, they have all been considered and the distance amongst them clearly measured and given. There is an interesting grouping of the result as well. For instance, all the 2" structures are together, the 4" ones are separately mentioned and so on - a very succinct and mnemonic way of giving the statistics.)

36. आतुरमुपक्रममाणेन भिषजाऽऽयुरादावेव परीक्षितव्यं सत्यायुषि व्याध्यृत्वग्निवयोदेहबलसत्वसात्म्यप्रकृति भेषजदेशान् परीक्षेत।।

The physician who commences treating a patient should at the very outset examine the residual life span or the *āyu* of the patient (on the criteria specified below). If such an *āyu* exists, he should then examine (*the several details of the following* :) (i) the disease, (ii) the season, (iii) the digestive and the assimilative capability, (iv) the age, (v) the strength of the body, (vi) the *sātva* or the habitual nature, (vii) the *satmya* or (the details of the) compatibilities or homologation (for foods and drugs for instance), (viii) the body constitution

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(*prakṛti*), (xi) the drugs (that the physician himself has, at the time of prescription) and (x) the geographical region (from where the patient comes).

तत्र महापाणिपादपार्श्वपृष्ठस्तनाग्रदशनवदनस्कन्धललाटं दीर्घाङ्गुलिपर्वोच्छ्वास प्रेक्षणबाहुं, विस्तीर्ण भ्रूस्तनान्तरोरस्कं, ह्रस्वजङ्घामेढ्रग्रीवं गम्भीरसत्वस्वरनाभिम्, अनुच्चैर्बद्धस्तनम्, उपचितमहारोमशकर्णं, पश्चान्मस्तिष्कं, स्नातानुलिप्तं, मूर्धानुपूर्व्याविशुष्यमाणशरीरं पश्चाच्च विशुष्यमाणहृदयं पुरुषं जानीयाद्दीर्घायुः खल्वयमिति।।

The patient who has well grown hands, feet, sides, back, teats, teeth, face, shoulders, forehead, elongated finger joints, eyes and arms; deep breathing, widely separated brows, a large interspace between the teats and broad chest; short shanks, penis and neck; deep voice and navel; solemn *satva*; breasts not too high nor too firm; ears fleshy, big and hairy; head which gets elevated backwards; and a body which gets dried after being smeared with oil or bathed, starting from the head first and then only chest region – if the patient is like this, know that he has a good life span or the *ayu*, still remaining for him.

तमेकान्तेनोपक्रमेत्। एभिर्लक्षणैर्विपरीतैरल्पायुः। मिश्रैर्मध्यमायुरिति।

Commence concentrated and intensive (*ekānta*) measures of treatment immediately (for this category of patients). Those who have characteristics exactly opposite of what have been specified here are to be considered as having only a little life span left. Those that have mixed features, their life span is just medium, neither great nor very less. Ss. su. 55.3,4

37. गूढसन्धिसिरास्नायुः संहतांगः स्थिरेन्द्रियः।
उत्तरोत्तरसुक्षेत्रो यः स दीर्घायुरुच्यते।।
गर्भात् प्रभृत्यरोगो यः शनैः समुपचीयते।
शरीरज्ञानविज्ञानैः स दीर्घायुः समासतः।।

"A long lived person has his joints, veins and tendons not visible outside but hidden (*because they are well concealed by the muscles that are well grown*); body well knit (*samhatānga*); senses firm and steady; all the organs from foot to the head, well-formed and pleasing (*sukṣetra*). He is free from diseases even from his womb stage. His body (*śārīra*), knowledge (*jnāna*), as well as the special education, for instance the professional competence and expertise (*vijnāna*) have developed slowly and gradually. Such a person is in general long lived". Ss. su. 35, 5,6

38. मध्यमस्यायुषो ज्ञानमत ऊर्ध्वं निबोध मे। अधस्तादक्षयोर्यस्य लेखाः स्युर्व्यक्तमायताः।।
द्वे वा तिस्रोऽधिका वाऽपि पादौ कर्णौ च मांसलौ। नासाग्रमूर्ध्वं च भवेदूर्ध्वं लेखाश्च पृष्ठतः।।
यस्य स्युस्तस्य परममायुर्भवति सप्ततिः।। जघन्यस्यायुषो ज्ञानमत ऊर्ध्वं निबोध मे। ह्रस्वानि यस्य पर्वाणि सुमहच्चापि मेहनम्।। तथोरस्यवलीढानि न च स्यात्पृष्ठमायतम्। ऊर्ध्वं च श्रवणौ स्थानान्नासा चोच्चा शरीरिणः। हसतो जल्पतो वाऽपि दन्तमांसं प्रदृश्यते। प्रेक्षते यश्च विभ्रान्तं स जीवेत्पंचविंशतिम्।।

In a medium lived person, below his eyes, two, three or more well formed lines appear; feet and eyes become fleshy; nose tip is facing upward and there are

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upward lines on his back. His highest life expectation is about seventy years* : A short lived person has the following characteristics. His finger joints are short, penis very great; ribs are closely compressed on his chest; back is also not wide; ears are situated too high compared to their usual position (in the other categories of persons); nose also is similarly a little high. He exhibits his gums while laughing or talking and when he sees, he sees as if he is confused (for instance, with unsteady eyes). He lives for about twenty-five years. 7-11.

(ii) *somatotypes for general and clinical assay :*

39. अथ सारान् वक्ष्यामः ।

We shall now specify the essential types of the human body (considering as to which of the seven *dhātus* predominate in particular individual). Ss. su. 35. 16.

(To presume that in an individual person, there can be differential predominance of the seven *dhātus* and make this as a criterion for somatotypec categorisation of the human body is an interesting feature. The details are moreover given in a Chapter on how to commence the treatment of patient, as a measure for judgement for the clinician to arrive at some preliminary lines of approach - not as an information which is an end in itself. These also aid in determining the span of the life left. The order given below is that of decreasing efficiency on this count - the *sātvic* is the longest lived and the haemal, the shortest. The characteristics mentioned are : psychological, morphological and general. Apart from the seven categories (as per the seven *dhatus* there is one more - where presumably none of the seven *dhātus* predominate over the other six; all are equally developed. This is therefore the situation of a balance and hence named *sātvic* (i.e., the innate or the true category) and heads the list of the somato-types. Clinically speaking, the order given is progressively less desirable).

40. स्मृतिभक्तिप्रज्ञाशौचशौर्योपेतं कल्याणाभिनिवेशं सत्वसारं विद्यात् ।

(They, i.e. the somatotypes are as follows): 1. Satvic : (the true or the natural category): He is endowed with a good retentivity, a devoutness, an understanding capacity (*prajñā*), valour (*śaurya*) and cleanliness and is intent on doing good. (*Unlike as in all the others, no morphological speciality is mentioned against this* category).

स्निग्धसंहतश्वेतास्थिदन्तनखं बहुलकामप्रजं शुक्रेण ।

2. *Śukra* (semenic category): His body is glossy and compact (well knit); teeth and nails are (quite) white and he has much lustfulness and many children.

41. अकृशमुत्तमबलं स्निग्धगाम्भीरस्वरं सौभाग्योपपन्नं महानेत्रं च मज्ज्ञा ।

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* SS considers 75 years as the medium span for human life, 25, the short span; 100-120 is presumably the long span. SS confers this presumption a little later in the Chapter "between sixty and seventy is the middle age." SS. su. 35. 29.

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3. *Majja* (marrowic category) : He is not at all weak and is (in fact having) excellent strength. His voice is friendly (*snigdha*) and deep (solemn). He is fortunate and has large eyes.

महाशिरः स्कन्धं दृढदन्तहन्वस्थिनखमस्थिभिः।

4. *Asthi* (bonic category): His head is large and (so are his) shoulders. His teeth, jaws, bones and nails are firm.

स्निग्धमूत्रस्वेदस्वरं बृहच्छरीरमायाससहिष्णुं मेदसा।

5. *Meda* (fatty category) : He has a viscous urine and sweat. His voice is friendly (husky?). His body is large and cannot tolerate much fatigue.

अच्छिद्रगात्रं गूढास्थिसन्धि मांसोपचितं च मांसेन।

6. *Māmsa* (fleshy category): He has an unbroken body, his bones and joints are in general well hidden (*as there is enough of muscle formation*), and well provided (*upacita*) with flesh.

स्निग्धताम्रनखनयनतालुजिह्वौष्ठपाणिपादतलं रक्तेन।

7. *Rakta* (haemal category): Nails, eyes, palate, tongue, lips and palms and soles are glossy and copper red.

सुप्रसन्नमृदुत्वग्रोमाणं त्वक्सारं विद्यादिति।

8. *Tvag* (dermic category): His skin is graceful, soft and hairy.

एषां पूर्वं पूर्वं प्रधानमायुः सौभाग्ययोरिति।

Among these eigth types, the preceding type is to be known (in each case) as endowed with greater life span and better fortune (than the type that succeeds it). Ss. su. 35, 16.

42. विशेषतोऽङ्गप्रत्यंगप्रमाणादथ सारतः।
परीक्ष्यायुः सुनिपुणो भिषक् सिध्यति कर्मसु।।

A general remark : By specially examining the patient (on these lines) as to the details of the proportions of his organs and their further divisions as well as the essential type to which his body belongs, the highly expert physician can succeed in his work (without any doubt whatsover). Ss. su. 35. 17.

(iii) *from Caraka*

43. तत्र त्रयः शरीरदोषा वातपित्तश्लेष्माणः, ते शरीरं दूषयन्तिः द्वौ पुनः सत्वदोषौ रजस्तमश्च, तौ सत्वं दूषयतः। ताभ्यां च सत्वशरीराभ्यां दुष्टाभ्यां विकृतिरुपजायते, नोपजायते चाप्रदुष्टाभ्याम्।

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(Therein), three are the morbid elements of the body: *vata, pitta* and *sleṣma*; they vitiate the body. And two are the morbid elements of the mind, *rajas* and *tamas*; they vitiate the mind. Disorder arises when these two, the mind and the body, are vitiated; no disorder arises, if the two are unvitiated. Cs. sa. 4.34

44. त्रिविधं खलु सत्वं शुद्धं, राजसं, तामसमिति। तत्र शुद्धमदोषमाख्यातं कल्याणांशत्वात्, राजसं सदोषमाख्यातं रोषांशत्वात्, तामसमपि सदोषमाख्यातं मोहांशत्वात्। तेषां तु त्रयाणामपि सत्वानामेकैकस्य भेदाग्रमपरिसंख्येयं तरतमयोगाच्छरीरयोनिविशेषेभ्यश्चान्योन्यानुविधानत्वाच्च। शरीरं ह्यपि सत्वमनुविधीयते, सत्वं च शरीरम्। तस्मात् कतिचित्सत्वभेदाननूकाभिनिर्देशेन निदर्शनार्थमनुव्याख्यास्यामः।

Of three kinds indeed is the mind : *satva*, the innate reality, the pure; the tinged (*rajas*); and, the dull (*tamas*). Therein, the pure is said to be blemishless because of the element of the good and the auspicious (in it). The *rājasa* is said to be with a blemish because of the element of anger (within it). The *tāmasa* is also said to be with a blemish because of the element of infatuation (within it). Of these three kinds of mind, each and every individual's further differentiation is of course uncountable because of the combination of the less and the more of the specialities of the body and the womb (in which it is born) as well as the mutual, interacting conformity (of the body and the mind). (For, it should be noted that) body also conforms (itself) with the mind and the mind also, with the body. Therefore, we shall now comment upon some of the differentiations of the mind by pointing out their innate dispositions (solely) as an illustration (of the infinite possibilities). Cs. sa. 4.36.

शुचिं सत्याभिसन्धं जितात्मानं संविभागिनं ज्ञानविज्ञानवचनप्रतिवचनसंपन्नं स्मृतिमन्तं कामक्रोधलोभमानमोहेर्ष्याहर्षामर्षापेतं समं सर्वभूतेषु ब्राह्मं विद्यात्।।

seven kinds of the pure mind. Clean, intent on truth, self-restrained, disposed to sharing (his pleasures) with others; excellent in knowledge, expertise, statement (lit. in speech) and retort; retentive, prudent and discreet; free from lust, anger, greed, pride, jealously, excessive delight and impatience; and equanimous to all – such (a mind) should be known as *brahma* or the godly type. Cs. sa. 4.37.

इज्याध्ययनव्रतहोमब्रह्मचर्यपरमतिथिव्रतमुपशान्तमदमानरागद्वेषमोहलोभरोषं प्रतिभावचनविज्ञानोपधारणशक्तिसंपन्नमार्षं विद्यात्।।

Intent on (performing) sacrificial rites, (carrying out) vedic and scriptural study, vows, oblation, and continence; considerative of hospitality of guests as his vow; one in whom arrogance, pride, attachment, hatred, infatuation, greed and rancour have ceased (to have any role whatsoever); excellent in understanding, speech, expertise and capacity of reflection – such a mind is to be known as *ṛṣi* or sage type.

ऐश्वर्यवन्तमादेयवाक्यं यज्वानं शूरमोजस्विनं तेजसोपेतमक्लिष्टकर्माणं दीर्घदर्शिनं धर्मार्थकामभिरतमैन्द्रं विद्यात्।

Rich and luxurious; commanding in speech (lit. who appropriates speech, to himself, in a situation); carrying out sacrificial rites; brave, energetic, spirited,

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undisturbed in (his) actions and far-sighted; actively engaged in (works of) *dharma* or religious merit, (acquiring) material prosperity and fulifilling personal desires - a person (of such a mind), is to be known as *Indra* or of lordly type.

लेखास्थवृत्तं प्राप्तकारिणं असंप्रहार्यमुत्थानवन्तं स्मृतिमन्तमैश्वर्यलम्भिनं व्यपगतरागेर्ष्याद्वेषमोहं याम्यं विद्यात्।

One whose conduct is literally as per the dictates of the written texts; who carries out one's activities wholly in the proper way, unbeatable by any, ever alert and retentive; one who will (definitely) obtain wealth (without any doubt) and who is free from passion, jealousy, hatred and infatuation - he should be known as the *yama* or the restrained type.

शूरं धीरं शुचिमशुचिद्वेषिणं यज्वानमम्भोविहाररतिमक्लिष्टकर्माणं स्थानकोपप्रसादं वारुणं विद्यात्।।

Heroic, couragoous, clean, hater of uncleanliness; one who carries out sacrificial rites; one who loves sporting in water; who is undisturbed and unweaned in his activities and one who gets both angry or pleased (immediately) depending on the situation - he should be known as the *varuṇa* or the water god type.

स्थानमानोपभोगपरिवारसंपन्नं धर्मार्थकामनित्यं शुचिं सुखविहारं व्यक्तकोपप्रसादं कौबेरं विद्यात्।।

Excellent in status, honour and prestige, enjoyment (of the facilities) and entourage; constantly (engaged in activities) of religious merit (*dharma*), acquiring material prosperity and fulfilling personal desires; clean, happy and sportful, explicit in anger as well as gratification -(he) should be known as *kaubera* or the god-of-the-wealth type.

प्रियनृत्यगीतवादित्रोल्लापकश्लोकाख्यायिकेतिहासपुराणेषु कुशलं गन्ध-
माल्यानुलेपनवसनस्त्रीविहारकामनित्यमनसूयकं गान्धर्वं विद्यात्।

One who loves dance, music, musical instruments, and coaxing, complimentary speech; competent in recitation, story-telling and the narration of historical accounts and *purāṇic* expositions; constantly engaged in personal decorations with scents, flowers, anointments and dresses as well as in sporting with ladies and lust and free from ill-will (to any one) - he should be known as *gāndharva* or a demi-god type.

इत्येवं शुद्धस्य सत्वस्य सप्तविधं भेदांशं विद्यात् कल्याणांशत्वात् ; तत्संयोगात्तु ब्राह्ममत्यन्तशुद्धं व्यवस्येत्।।

In this way, one should know these seven as the distinctive types of the pure-mind because of the element of goodness (commonly found in all of them). One should deal with the godly type as being a proper combination (of all the good factors) (and therefore) the purest. Cs. sa. 4.37.

characteristics of a pure mind

आरोग्यं प्रशमो रूपं ज्ञानविज्ञानमार्यता।
दीर्घमायुः सुखात्यक्तं (सुखावाप्ति) सामान्यं शुद्धलक्षणम्।।

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Health, tranquility, beautiful figure, endowed with knowledge, expertise and gentility, long life, attainment of comforts - these are the common characters of (a person with) pure mind - Kayapa

Six kinds of the tinged or the rajasic mind Cs. sa. 4.38

शूरं चण्डमसूयकमैश्वर्यवन्तमौपधिकंरौद्रमननुक्रोशमात्मपूजकमासुरं विद्यात्।।

Heroic, violent, spiteful, endowed with wealth, deceitful and cheating (or, an extortioner of money), fierce, merciless, self-worshiping - he should be known as an *āsura* or evil type.

अमर्षिणमनुबन्धकोपं छिद्रहारिणं क्रूरमाहारातिमात्ररुचिमामिषप्रियतमं स्वप्नायासबहुलमीर्ष्युं राक्षसं विद्यात्।।

Intolerant, keeping the anger for a long time, hitting at the vulnerable and the weak points, cruel, excessively fastidious in food and taste, very fond of meat, taking plenty of efforts (in any work he undertakes) and taking too much sleep, and, envious - he should be known as a *rākṣhasa* or demoniacal type.

महाशनं स्त्रैणं स्त्रीरहस्काममशुचिं शुचिद्वेषिणं भीरुं भीषयितारं विकृत विहाराहारशीलं पैशाचं विद्यात्।।

An eater in great quantity ; one who is under the control of a woman; one who desires to stay with ladies in secrecy, unclean; a hater of cleanliness; a coward, bossing over others and frightening them, and one who habitually indulges in abnormal sports and food - he should be known as a *paiśāca* or fiendish type.

शुचिद्विडशुचिः क्रूरोऽभीरुर्भीषयिताऽविलः। मद्यमांसप्रियः शंकी पैशाचो बहुभोजनः।।

(The fiendish type is hating cleanliness, unclean, cruel, fearless, bossing and frightening, confused, loving liquor and flesh, always doubting and gluttonous. Kashyapa).

क्रुद्धशूरमक्रुद्धभीरुं तीक्ष्णमायासबहुलं संत्रस्तगोचरमाहारविहारपरं सार्पं विद्यात्।।

Heroic when angry (but) cowardly when not angry; energetic, taking much troubles (in his undertakings); (doing everything in a) perceptibly terrified (way); excessively engaged in food and sports - he should be known as *sarpa* or serpentine type.

आहारकाममतिदुःखशीलाचारोपचारमसूयकमसंविभागिनं अतिलोलुपम् अकर्मशीलं प्रैतं विद्यात्।

Lustful of food ; excessively and habitually distressful in his conduct and behaviour; slanderous; unsharing (of his pleasures with others); excessively cupid, and one who is habitually indolent and inactive - he should be considered as a *preta* or a corpse type.

अनुषक्तकाममजस्त्रमाहारविहारपरमनवस्थितममर्षणमसंचयं शाकुनं विद्यात्।।

Always interested in cohabitation, continously intent on food and sport, unsteady, intolerant, not collecting (any thing for future-money or belongings)-he should be considered as a *śakuna* or a bird type.

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इत्येवं खलु राजसस्य सत्वस्य षडविधं भेदांशं विद्यात्, रोषांशत्वात्।।

In this way indeed the six distinctive types of the *rājasic* mind should be known(all having) an element of anger as a common factor.

Kashyapa includes a seventh type among the *rajasic* . Constantly employed in giving gifts, sleeping, excessive decoration, drinks, eating and cohabitation; exhilarated and gluttonous - he should be known as a *yaksa* or a spirit type.

Three kinds of the dull or the tamasic mind. Cs. sa. 4.39

निराकरिष्णुममेधसं जुगुप्सिताचाराहारं मैथुनपरं स्वप्नशीलं पाशवं विद्यात्।।

Habitually repudiative and denying ; unintelligent and idiotic; despisable in the habits of his food and sports; always engaged in cohabitation and habitually sleeping - he should be known as *paśu* or beastly type.

भीरुमबुधमाहारलुब्धमनवस्थितमनुषक्तकामक्रोधं सरणशीलं तोयकामं मात्स्यं विद्यात्।।

Cowardly, ununderstanding and foolish; greedy in food; unsteady; interested in lust and anger; habitually wandering about and desirous of water - he should be known as *matsya* or fish type.

अलसं केवलमभिनिविष्टमाहारे सर्वबुद्ध्यंगहीनं वानस्पत्यं विद्यात्।।

Lazy, interested only in food, totally deficient in intelligence and understanding,- he should be known as *padapa* or the vegetable type.

इत्येवं तामसस्य सत्वस्य त्रिविधं भेदांशं विद्यान्मोहांशत्वात्।।

In this way one should be known the three distinctive kinds of the dull mind (all having) an element of infatuation as a common factor. Cs. sa 5.39

45. स्मृतिमन्तो भक्तिमन्तः कृतज्ञाः प्राज्ञाः शुचयो महोत्साहा दक्षा धीराः समरविक्रान्तयोधिनस्त्यक्तविषादाः सव्यवस्थितगतिगम्भीरबुद्धिचेष्टाः कल्याणाभिनिवेशिनश्च सत्वसाराः।।

The person of *satvic* essence. This is a person whose very essence, strength or the stable mooring is satva or goodness. (He is the one who is) retentive in memory, devout, grateful, wise, clean, greatly enthusiastic, efficient, courageous, a brave warrier in the battle field; he has abandoned dejection; his gain, is well disposed; his intellect and activities, solemn and always intent on what is auspicious. Ca. vi. 8.110.

46. स्वल्पशरीरा ह्यपि ते निजागन्तुनिमित्तासु महतीष्वपि पीडास्वव्यथा दृश्यन्ते सत्वगुणवैशेष्यात्; मध्यसत्वास्त्वपरानात्मन्युपनिधाय संस्तम्भयन्त्यात्मनाऽऽत्मानं परैर्वाऽपि संस्तभ्यन्ते; हीनसत्वास्तु नात्मना नापि परैः सत्वबलं प्रति शक्यन्ते उपस्तम्भयितुं, महाशरीरा ह्यपि ते स्वल्पानापि वेदनानामसहा दृश्यन्ते, सन्निहित भयशोकलोभमोहमाना रौद्रभैरवद्विष्टबीभत्सविकृतसंकथास्वपि च पशुपुरुषमांसशोणितानि चावेक्ष्य विषादवैवर्ण्यमूर्च्छोन्मादभ्रमप्रपतनानामन्यतममाप्नुवन्त्यथवा मरणमिति।।

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Even though he is of a small build in body, he is seen to be free from perturbation even in great sufferings due to the inborn or the oncoming causes. (Characteristics of a medium mental strength:)- He can stabilise himself by assuming upon himself as to what would be the situation in the other (on similar conditions) or he can be stabilised by others. (Characteristics of an inferior mind:)- He cannot be stabilised in his mind either by his own efforts or by others; even though of great build in the body, he is seen to be intolerant of even small pains. He is easily susceptible to fear, grief, greed, infatuation and pride; and even by the stories that are frightful, horrible, hateful, disgusting or aberrant or by seeing the flesh and blood of beasts and men, he will get any one of these: agitation, decolouration, fits, insanity, giddiness, or a falling down or even death. Ca. vi. 8.119.

47. द्विजोहि वेदाध्ययन व्रताह्निक क्रियादिभिः देह हितं न चेष्टते। नृपोपसेवी नृपचित्त रक्षणात् परानुरोधनात् भयात्।। नृचित्त वर्तिन्युपचारतत्परा मृजाभि (वि) भूषानिरता पणाङ्गना। सदासनादत्यनु बन्ध विक्रय क्रयादि लोभादपि पण्यजीविनः।। सदैव ते ह्यागतवेगनिग्रहं समाचरन्ते न च काल भोजनम्। निहारविहार सेविनो भवन्ति येऽन्येऽपि सदाऽतुराश्च ते।।

The always patient.- He who does not take meals in proper times and has the habit of indulging in untimely restraint or release (of natural urges) - he is a patient always, for instance, a brahmin intent on vedic studies, carrying out vows and rituals; an attendant servant on a royal person ; a prostitute attending upon the mind of the royal person and the merchant, who is always seated and greedy on the gains and the sales; and such others. Cs si. 11. 28-30.

48. इह खलु शरीरमधिकृत्याष्टौ पुरुषा निन्दिता भवन्तिः तद्यथा-अतिदीर्घश्च, अतिह्रस्वश्च, अतिलोमा च, अलोमा च, अतिकृष्णश्च, अतिगौरवश्च अतिस्थूलश्च, अतिकृशश्चेति। तत्रातिस्थूलकृशयोर्भूय एवापरे निन्दितविशेषा भवन्तिः अतिस्थूलस्य तावदायुषो ह्रासो जवोपरोधः कृच्छ्रव्यवायता दौर्बल्यं दौर्गन्ध्यं स्वेदाबाधः क्षुदतिमात्रं पिपासातियोगश्चेति भावन्त्यष्टौ दोषाः। तदतिस्थौल्यमतिसंपूरणाद्गुरुमधुरशीत स्निग्धोपयोगादव्याया-मादव्यवायाद्दिवास्वप्नाद्धर्ष- नित्यत्वादचिन्तनाद्बीजस्वभावाच्चोप जायते। मेदसाऽऽ- वृतमार्गत्वाद्वायुः कोष्ठोविशेषतः। चरन् संधुक्षयत्यग्निमाहारं शोषयत्यपि।।

तस्मात् स शीघ्रं जरयत्याहारं चातिकाङ्क्षति।
विकारांश्चाश्नुते घोरान् कांश्चित्कालव्यतिक्रमात्।।
एतावुपद्रवकरौ विशेषादग्निमारुतौ। एतौ हि दहतः स्थूलं वनदावो वनं यथा।।
मेदस्यतीव संवृद्धे सहसैव अनिलादयः। विकारान् दारुणान् कृत्वा नाशयान्त्याशु जीवितम्।।

Now in this world, eight (types of) persons become censured (viz. undesirable) from the health point of view in respect of their bodily constitution.

They are - the very tall and the very short, the very hairy and the hairless, the very dark and the very fair and the very corpulent and the very emaciated.

Therein, among the very corpulent and the very emaciated, there occur many other censurable traits and specialities. For the very corpulent the occur there eight disabilities : diminution of life span, lack of agility (lit. obstruction to speed), difficulity in sex-act, debility, bad fetor (body odour), distressing sweat, excessive hunger and excessive thirst. Such an excessive corpulence is caused by overeating; by the use of articles that are heavy, sweet, cold and unctuous; by lack of exercise and sex ; by sleeping in day and continued cheerfulness, by a lack of thinking habit and the inherited tendency. Cs. su. 21. 3.4

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Since its path is obstructed by fat, *vāyu* moving about specially in the stomach ever kindles the digestive fire even as it (continues to) consume the food (supplied). That is why he becomes old speedily and desires food excessively; he obtains terrible diseases after a lapse of sometime. This much is the trouble (for him) specially from the (gastric) fire and the *vāyu*.

These two, the gastric fire and the *vāta* vitiation are the special agents of havoc (in the very corpulent). They burn up the bulky man as the forest fire burns up the forest. If the fat element increases (in the body of the very corpulent) inordinately, the *vāta* and the other vitiations, causing fierce disorders suddenly, destroy his life quickly. Cs. su. 21, 7-8.

मेदोमांसातिवृद्धत्वाच्चल स्फिगुदरस्तनः। अयथोपचयोत्साहो नरोऽतिस्थूल उच्यते।।

That man is spoken of as over corpulent who on account of in-ordinate increase in fat and flesh, (is disfigured with) buttocks, belly and breasts moving about (being the specific regions where the excess of fat gets lodged) and whose increase in bulk is not matched by a corresponding (increase in) enthusiasm and energy.

इति मेदस्विनो दोषा हेतवो रुपमेव च।

These are the blemishes, the reasons thereof and the body form of the fatty. Cs. su. 21. 9.10.

वक्ष्यते वाच्यमतिकार्श्यं त्वतः परम्।।
सेवा रुक्षान्नपानानां लङ्घनं प्रमिताशनम्। क्रियातियोगः शोकश्च वेगनिद्राविनिग्रहः।।
रुक्षस्योद्वर्तनं स्नानस्याभ्यासः प्रकृतिर्जरा। विकारानुशयः क्रोधः कुर्वन्त्यतिकृशं नरम्।

From now ownards we speak of the very emaciated. Indulgence in dry food and drink, fasting, under-eating, over-work, suppression of the urges of nature and sleep, dry massage, repeated bathings, constitutional tendency, old age, a sequelael of diseases and wrathful disposition render a man extremely emaciated.

व्यायाममतिसौहित्यं क्षुत्पिपासामयौषधम्। कृशो न सहते तद्वदतिशीतोष्णमैथुनम्।।
प्लीहा कासः क्षयः श्वासो गुल्मोऽर्शांस्युदराणि च। कृशं प्रायोऽभिधावन्ति रोगाश्च ग्रहणीगताः।

The emaciated cannot stand (the strain of) excericse or of a surfeit of food, hunger, thirst, disease or strong medication and similarly great cold or heat and the strain of sex. Splenic disorders, cough, wasting, *gulma*, piles, abdominal affections and disorders of assimilatory tract generally assail (him).

शुष्कस्फिगुदरग्रीवो धमनीजालसंततः। त्वगस्थिशेषोऽतिकृशः स्थूलपर्वा नरो मतः।।

(He) who is dry, (lean of) buttocks, belly and neck and is covered with a network of vessels (prominently standing out) and who is dried (reduced upto) skin and bones is considered the extremely emaciated. Cs. su. 21 11-15.

सततं व्याधितावेतवतिस्थूलकृशौ नरौ। सततं चोपचर्यौ हि कर्शनैर्बृंहणैरपि।।

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Always sick are these two: the over-stout and the over-emaciated. Always are they to be treated by slimming and nourishing remedies respectively. Cs. su. 21. 16

स्थौल्यकार्श्ये वरं कार्श्यं समौपकरणौ हि तौ। यद्युभौ व्याधिरागच्छेत् स्थूलमेवातिपीडयेत्।।

Of the stout and the emaciated, the emaciated is better, though both alike need to be remedied. When both are affected with disease, it is the stout that suffer more. Cs. su. 21. 17.

49. सममांसप्रमाणस्तु समसंहननो नरः। दृढेन्द्रियो विकाराणां न बलेनाभिभूयते।।
क्षुत्पिपासातपसहः शीतव्यायामसंसहः। समपक्ता समजरः सममांसचयो मतः।।

The person who is well proportioned in flesh, well-knit in figure and firm and steady of senses is not overpowered with the violence of a disease. He who is able to endure hunger, thirst and direct sun and also cold and exercise and has normal digestive and assimilative powers is regarded as being properly proportioned in flesh. Cs. su. 21. 18, 19

50. तत्र तावदियमातुरपरिज्ञानहेतोः। तद्यथा-अयं कस्मिन् भूमिदेशे जातः संवृद्धो व्याधितो वा; तस्मिंश्च भूमिदेशे मनुष्याणामिदमाहारजातम्, इदं विहारजातम्, इदमाचारजातम्, एतावच्च बलम्, एवं विधं सत्वम् एवंविधं सात्म्यम्, एवंविधं दोषः भक्तिरियम्, इमे व्याधयः, हितमिदम् अहितमिदमिति प्रायोग्रहणेन। औषधपरिज्ञानहेतोस्तु कल्पेषु भूमिपरीक्षा वक्ष्यते।।

Therein, (i.e. among the ten aspects the physician should examine before he commences treatment) he should also carry out an examination of the geographical area (lit. land); this is to understand the patient or the drug (with respect to their regional specialities). The following are the particulars that would serve the objective of understanding the patient: in which land is this patient born, bred up and got the disease; in such a regional area (of the patient in question, to ascertain that) this is the totality of the features for the people with respect to their food, general modes of sports and recreation, as well as customs and practises - this much is the strength; - of this type is the (strength of the) mind; - of this type, the homologation; - of this type, the vitiation; - this: the digestive capacity; - these, the diseases; this, is what is wholesome and this is what is unwholesome. The reasons that would aid in understanding the drugs with respect to their geographical region, however, will be told in *kalpasthana* under the section on examination of the soil. Cs. vi 8.93.

आतुरस्तु खलु कार्यदेशः। तस्य परीक्षा आयुषः प्रमाणज्ञानहेतोर्वा स्यात्, बलदोषप्रमाणज्ञानहेतोर्वा। तत्र तावदियं बलदोषप्रमाणाज्ञानहेतोः, दोषप्रमाणानुरुपो हि भेषजप्रमाणविकल्पो बलप्रमाणविशेषापेक्षो भवति। सहसा ह्यतिबलमौषधमपरीक्षकप्रयुक्तमल्पबलमातुरमतिपातयेत्; न ह्यतिबलान्याग्नेयवायवीयान्यौषधान्यग्निक्षारशस्त्रकर्माणि वा शक्यन्तेऽल्पबलैः सोदुम्; असह्यातितीक्ष्णवेगत्वाद्धि तानि सद्यः प्राणहराणि स्युः। एतच्चैव कारणमपेक्षमाणा हीनबलमातुरमविषादकरैर्मृदुसुकुमारप्रायैरुत्त- रौत्तरगुरुभिरविभ्रमैरनात्ययिकैश्चोपचरन्त्यौषधैः; विशेषतश्च नारीः, ताह्यनवस्थितमृदुविवृतविक्लवहृदयाः प्रायः सुकुमार्योऽबलाः परसंस्तभ्याश्च तथा बलवती बलवद्व्याधिपरिगते स्वल्पबलमौषधमपरीक्षकप्रयुक्तमसाधकमेव भवति।।

Patient is the region of activity (for the physician). His examination is (to be carried out) to understand the measure of the span of life (still left) for him or the

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measure of the strength and the vitiation (that he has). Therein, this is why (he is) to understand the measure of the strength (of the patient) and the vitiations (that the latter has): it is in proportion to the measure of the vitiation that the alternatives of the proportions of the medicines are determined (and this in turn) depends upon the specific measures of the (patient's) strength. A very strong medicine given suddenly and unexamined will over reach a patient of little strength because of unbearable and excessive acuteness and speed of action; this will (in fact) become immediately fatal. It is not possible for (the patients of) little strength to bear the very strong medicines of the nature of fire or *vāyu* or the procedures of cautery, caustics and surgery. Because of its dependence on such a reason only, a patient of deficient strength, is nursed by medicines that are not distressful, gentle, tender, increasing in gravity (where needed) only progressively (and gradually), non-perplexing and not exceedingly pointed (i.e. excessively specific); (this is so) specially (for) the ladies, for they are mostly unsteady, soft, open and agitated in their heart, tender, non-strong and they stay (mostly) under protection of others. Similarly, a medicine of little strength applied unexamined in the case of a strong man and when (he is) afflicted with a strong disease becomes only effectless. Cs. vi. 8.94.

e. *clinical examination*
(i) *in terms of the constitution of the body*

51. तस्मादातुरं परीक्षेत प्रकृतितश्च, विकृतितश्च, सारतश्च संहननतश्च प्रमाणतश्च सात्म्यतश्च, सत्वतश्च, आहारशक्तितश्च, व्यायामशक्तितश्च, वयस्तश्चेति, बलप्रमाणविशेषग्रहणहेतोः ।।

It is therefore that (the physician) should examine the patient (even before he commences the treatment, in the following ten aspects, - the famous ten points of examination called *dasemani*) in terms of his constitution (habitus), pathological condition, tone (of the system), compactness (of the build), proportion (of the organs), homologation, mental strength, the power of digesting food, the power of his doing physical exercises and age - in order to understand the specialities of the measures of his strength. Cs. vi. 8.94.

52. तत्र प्रकृत्यादीन् भावाननुव्याख्यास्यामः । तद्यथा-शुक्रशोणितप्रकृतिं, कालगर्भाशयप्रकृतिमातुराहारविहारप्रकृतिं महाभूतविकारप्रकृतिं च गर्भशरीरमपेक्षते। एतानि हि येन येन दोषेणाधिकेनैकेनानेकेन वा समनुबद्ध्यन्ते, तेन तेन दोषेण गर्भोऽनुबद्ध्यतेः ततः सा सा दोषप्रकृतिरुच्यते मनुष्याणां गर्भादिप्रवृत्ता। तस्माच्छ्लेष्मलाः प्रकृत्या केचित्, पित्तलाः केचित्, वातलाः केचित्, संसृष्टाः केचित्, समधातवः केचिद्भवन्ति।

Therein, we shall now comment in detail on these states of the natural constitution and the like. This is as follows. A constitution determined by the paternal and the maternal factor, a constitution determined by the effect of time and its stay in the mother's womb, a constitution determined by the food and recreational indulgences of the mother, and a constitution determined by the variations in the component primordial elements - all of these depend upon what happened in the body of the foetus (while it was in the womb). In whatever (factors of) blemishes these (diverse congenital constitutions) become associated in excess to others or by any one of them even, the foetus gets *tied* up with those very same blemishes, accordingly. Then onwards, persons are said to be of those

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particular blemishes commencing from the very birth. It is in this way that some become *śleṣmic* by their very nature (i.e. congenitally); some, of *pitta*: some, of *vāta*: some, mixed up; and, some equally balanced among all the three vitiations. Cs. vi 8.95.

53. तेषां हि लक्षणानि व्याख्यास्यामः। श्लेष्मा हि स्निग्धश्लक्ष्णमृदुमधुरसारसान्द्र मन्दस्तिमित-गुरुशीतविज्जलाच्छः। तस्य स्नेहाच्छ्लेष्मलाः, स्निग्धांगाः, श्लक्ष्णत्वाच्छ्लक्ष्णांगाः, मृदुत्वाद्दृष्टिसुख-सुकुमारावदातगात्राः, माधुर्यात् प्रभूतशुक्रव्यवायापत्याः सारत्वात् सारसंहतस्थिरशरीराः, सान्द्रत्वादुपचितपरिपूर्ण सर्वांगः, मन्दत्वान्मन्दचेष्टाहाख्याहारः, स्तैमित्यादशीघ्रारम्भक्षोभविकाराः, गुरुत्वात् साराधिष्ठितावस्थितगतयः, शैत्यादल्पक्षुत्तृष्णासंतापस्वेददोषाः, विज्जलत्वात् सुश्लिष्टसारसन्धिबन्धनाः, तथाऽच्छत्वात्, प्रसन्नदर्शनाननाः प्रसन्नस्निग्धवर्णस्वराश्च भवन्ति। त एवंगुणयोगाच्छ्लेष्मलाः बलवन्तो वसुमन्तो विद्यावन्त ओजस्विनः शान्ता आयुष्मन्तश्च भवन्ति।।

We shall now comment upon the characteristics (of every one of them) here. The (person of a) *kapha* constitution is unctuous, smooth, soft, sweet, firm, dense, slow, stable, heavy, cold, viscid and clear.

Because of its unctuousness, those of *kapha* habitus have glossy limbs; because of smoothness, smooth limbs; because of softness, pleasant, delicate and clear limbs; because of sweetness, a profusion of semen, desire for sex and many children; because of firmness, firm, well-knit and stable bodies; because of denseness, (they are) plump and rounded in all their limbs; because of slowness, (they are) slow in actions and speechs, because of stability, (they are) slow in their undertakings and in the change of moods and pathological conditions; because of heaviness, (they are) firm, large and stable in gait; because of coldness, (they are) meagre in their hunger, thirst, heat and perspiration: because of viscidity, (they are) firm and well kint in joints; because of clearness, (they have) clear looks and a mellow complexion and voice.

Owing to the combination of such qualities, those of *kapha* constitution are possessed of strength, wealth, knowledge, vitality, gentleness and long life. Cs. vi. 8.96.

54. पित्तमुष्णं तीक्ष्णं द्रवं विस्रमम्लं कटुकं च। तस्यौष्ण्यात् पित्तला भवन्त्युष्णासहा, उष्णमुखाः, सुकुमारावदातगात्राः, प्रभूतविप्लुव्यंगतिलपिडकाः; क्षुत्पिपासावन्तः क्षिप्रवलीपलितखालित्यदोषाः। प्रायोमृद्वल्पकपिलश्मश्रुलोमकेशाश्चः तैक्ष्ण्यातीक्ष्ण पराक्रमाः, तीक्ष्णाग्नयः, प्रभूताशनपानाः, क्लेशासहिष्णवो, दन्दशूकाः; द्रवत्वाच्छिथिल मृदुसन्धिर्मांसाः, प्रभूतसृष्टस्वेदमूत्रपुरीषाश्चः प्रभूतपूतिकक्षास्यशिरः शरीरगन्धाः, कट्वम्लत्वादल्पशुक्रव्यवायापत्याः, त एवंगुणयोगात् पित्तला मध्यबला मध्यायुषो मध्यज्ञानविज्ञानवित्तोपकरणवन्तश्च भवन्ति।।

The *pitta* constitution is hot, acute, fluid, smelling like raw meat, acid and pungent. Because of its heat, those of *pitta* habitus are intolerant to heat; very hot in the mouth; of delicate and clear bodies, profuse moles, freckles, spots and pimples on the body; of excessive hunger and thirst; subject to early wrinkles, grey hair and baldness and possessed generaly of scanty, soft and tawny hair on the head, face and body. Because of acuteness, (they have) keen valour and acute digestive fire; (are) given to take excessive quantity of food and drink, (and are) subject to incapacity to bear suffering; and, are constant eaters; because of fluidity, (they have) flabby and soft joints and flesh, and profuse discharge of sweat, urine and

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faeces. Because of smell like raw meat, they smell very much in their arm-pits, mouth, head and body. Because of pungency and acidity, (they have) a small quantity of semen, limited sex-appetite and scanty offsprings. Owing to a combination of such qualities, those of *pitta* constitution have moderate strength and life-span and are of moderate knowledge, experience, wealth and means. Cs. vi. 8. 97.

55. वातस्तु रुक्षलघुचलबहुशीघ्रशीतपरुषविशदः। तस्य रौक्ष्याद्व्रतला रुक्षापचितात्प शरीराः प्रततरुक्षक्षामसन्नसक्तजर्जरस्वरा जागरूकाश्च भवन्ति, लघुत्वाल्लघुचपल गतिचेष्टाहारव्यवहाराः, चलत्वादनवस्थितसन्ध्यक्षिभ्रूहन्वोष्ठाजिह्वाशिरः स्कन्धपाणिपादाः, बहुत्वाव्यवद्बहुप्रलापकण्डरासिराप्रतानाः, शीघ्रत्वाच्छीघ्रसमारम्भक्षोभ विकाराः शीघ्रत्रासरागविरागाः श्रुतग्राहिणोऽल्पस्मृतयश्च, शैत्याच्छीतासहिष्णवः प्रततशीतकोद्वेपकस्तम्भाः, पारुष्यात् परुषकेशश्मश्रुरोमनखदशनवदनपाणिपादाः, वैशद्यात् स्फुटितांगवयवाः सततसन्धिशब्दगामिनश्च भवन्तिः त एवं गुणयोगाद्व्रतलाः प्रायेणाल्पबलाश्चाल्पायुषश्चाल्पापत्याश्चाल्पसाधनाश्चाल्पधनाश्च भवन्ति।।

Vāta is dry, light, unsteady, abundant, swift, cold, rough and clear. Because of its roughness, those of *vāta* constitution are of dry, wasted and small bodies; of long drawn, dry, low, broken, hollow and hoarse voice and are always wakeful; because of ligthness (they are) light and inconsistent of gait, behaviour, diet and speech; becauses of unsteadiness, restless in joint, eyes, brows, jaws, lips, tongues, heads, shoulders, hands and feet; because of abundance, given to much talk and have prominent veins, and tendons; because of swiftness, quick in their understanding and vitiation of moods and pathological change; (they are) quickly affected by fear, likes and dislikes (and are) quick in grasping as well as forgetting; because of coldness, (they are) intolerant of cold (and are) greatly liable to suffer cold, shivering and stiffness; because of roughness, (they have), rough hair on the head, face and body, rough nails, teeth, mouth, hands and feet; because of clearness, (they have) cracked limbs, and their joints always make noise as they walk.

Owing to a combination of these qualities, those of *vāta* constitution are generally of small strength, short life-span, scanty offsprings and means and of meagre wealth. Cs. vi. 8.98.

56. संसर्गात् संसृष्टलक्षणाः।।

In a constitution of the combined type the qualities are also combined. Cs. vi. 8.99.

57. सर्वगुणसमुदितास्तु समधातवः इत्येवं प्रकृतितः परीक्षेत।।

Those possessed of an equipoise of vitiations are enowed with all the good qualities described. It is in this way, (the physician) should examine (the patient), in terms of his constitution.

(ii) *in terms of the tone of the body*:

सारतश्चेति साराण्यष्टौ पुरुषाणां बलमानविशेषज्ञानार्थमुपदिश्यन्तेः तद्यथा त्वग्रक्तमांसमेदोऽस्थिमज्जशुक्रसत्वानीति।

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In terms of the tone of the body means that there are eight tones for the persons. This is being taught so as to secure a special knowledge of the measures of men's strength: (the tones are with respect to the following aspects of the patient's body) such as, skin, blood, flesh, fat, bone, marrow, semen and psyche. Cs. vi. 8.102.

58. तत्र स्निग्धश्लक्ष्णमृदुप्रसन्नसूक्ष्माल्पगम्भीरसुकुमारलोमा सप्रभेव च त्वक् त्वक्साराणाम्। सा सारता सुखसौभाग्यैश्वर्योपभोगबुद्धि विद्यारोग्यप्रहर्षणान्यायुष्यत्वं चाचष्टे।।

The skin in those in whom it is of perfect tone is unctuous, smooth, soft, clear, thin, covered with short, deep-rooted and delicate hair and is as if full of lustre. Such a tone (of the skin) indicates- happiness, good fortune, power, pleasure, intelligence, knowledge, health, cheer and long life. Cs. vi. 8. 103

59. कर्णाक्षिमुखजिह्वानासौष्ठपाणिपादतलनखललाटमेहनं स्निग्धरक्तवर्णं श्रीमद्भ्राजिष्णुरक्तसाराणाम्। सा सारता सुखमुद्धतां मेधां मनस्वित्वं सौकुमार्यमनतिबलमक्लेशसहिष्णुत्वमुष्णासहिष्णुत्वं चाचष्टे।।

In those in whom blood is in perfect tone, the ears, the eyes, the mouth, the tongue, the nose, the lips, the hands, the soles of the feet, nails, forehead and the genitals are unctuous, reddish, shapely and full of lustre. This tone indicates happiness, great intelligence, cheerfulness, delicacy, moderate strength and incapacity to endure troubles and heat. Cs. vi. 8. 104.

60. शंखललाटकृकाटिकाक्षिगण्डहनुग्रीवास्कन्धोदरकक्षवक्षः पाणिपादसन्धयः स्थिरगुरुशुभमांसोपचिता मांससाराणाम्। सा सारता क्षमां धृतिमत्तौल्यं वित्तं विद्यां सुखमार्जवमारोग्यं बलमायुश्च दीर्घमाचष्टे।।

Those in whom flesh is in perfect tone, have their temples, forehead, nape, eyes, cheek, jaws, necks, shoulders, bellies, armpits, chests and joints of the hands and feet covered with firm, heavy and comely muscle (flesh). This tone indicates patience, endurance, stability, wealth, knowledge, happiness, frankness, health, strength and long life. Cs. vi. 8.105.

61. वर्णस्वरनेत्रकेशलोमनखदन्तौष्ठमूत्रपुरीषेषु विशेषतः स्नेहो मेदः साराणाम्। सा सारता वित्तैश्वर्यसुखोपभोगप्रदानान्यार्जवं सुकुमारोपचारतां चाचष्टे।।

Those in whom, fat is in perfect tone, possess excessive unctuousness in their complexion, voice, eyes, hair (on the head, face and body), nails, teeth, lips, urine and faeces. Their tone indicates wealth, power, happiness, luxury, charity, frankness and delicate living. Cs. vi. 8.106.

62. पार्ष्णिगुल्फजान्वरत्निजत्रुचिबुकशिरः पर्वस्थूलाः स्थूलास्थिनखदन्ताश्चस्थिसाराः। ते महोत्साहाः क्रियावन्तः क्लेशसहाः सारस्थिरशरीरा भवन्त्यायुष्मन्तश्च।।

Those in whom the bone is in perfect tone have stout heels, ankles, knees, forearm, bones, collar bones, chin, head, joints, bones, nails and teeth. They are greatly enthusiastic and active and tolerant to difficulties and have strong and firm bodies and a long life. Cs. vi 8. 107

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63. मृद्वंगा बलवन्तः स्निग्धवर्णस्वरा स्थूलदीर्घवृत्तसन्धयश्च मज्जसाराः। ते दीर्घायुषो बलवन्तः श्रुतवित्तविज्ञानापत्यसंमानभाजश्च भवन्ति।।

Those in whom, marrow is in perfect tone, are soft in body, strong, unctuous in complexion and voice; stout, long and rounded in the joints. They are long lived, strong, possessed of learning, wealth, experience, offsprings and honour. Cs. vi. 8.108.

64. सौम्याः सौम्यप्रेक्षिणः क्षीरपूर्णलोचना इव प्रहर्षबहुलाः स्निग्धवृत्तसारसमसंहत शिखरदशनाः प्रसन्नस्निग्धवर्णस्वरा भ्राजिष्णवो महास्फिचश्च शुक्रसाराः। ते स्त्रीप्रियोपभोगा बलवन्तः सुखैश्वर्यारोग्यवित्तसंमानापत्य भाजश्च भवन्ति।

Those in whom semen is in perfect tone, are gentle and possess gentle light in their eyes which appear full of milk and are (themselves) full of cheerfulness. They have unctuous, round, firm, close and even teeth; clear unctuous complexion and voice and are lustrous and have large hips. They are coveted source of enjoyment for women and are strong and possessed of happiness, power, health, wealth, honour and offsprings. Cs. vi. 8.109.

65. स्मृतिमन्तो भक्तिमन्तः कृतज्ञाः प्राज्ञाः शुचयो महोत्साहा दक्षा धीराः समरविक्रान्त योधिनस्त्यक्तविषादाः सव्यवस्थितगतिगम्भीरबुद्धिचेष्टाः कल्याणाभिनिवेशिनश्च सत्वसाराः।।

Those in whom the psychic element is in perfect tone, are possessed of memory, devotion, gratitude, wisdom, purity, great energy, skill, courage, prowess in battle, freedom from sorrow, firmness of tread, deep intelligence and character and are given to good pursuits. Cs. vi. 8.110.

66. तत्र सर्वैः सारैरुपेताः पुरुषा भवन्त्यतिबलाः परमसुखयुक्ताः क्लेशसहाः सर्वारम्भेष्वात्मनि जातप्रत्ययाः कल्याणाभिनिवेशिनः स्थिरसमाहितशरीराः सुसमाहितगतयः सानुनादस्निग्धगम्भीरमहास्वराः सुखैश्वर्य-वित्तोपभोगसंमानभाजो मन्दजरसो मन्दविकाराः प्रायस्तुल्यगुणविस्तीर्णापत्याश्चिरजीविनश्च।।

Those in whom all the elements are in perfect tone are very strong, endowed with very happy circumstances, able to bear trouble, selfconfident in all their enterprises, given to good pursuits, of firm and well-knit bodies, firm in tread, of resonant, mellow, deep and big voice and are possessed of happiness, power, wealth, pleasure and honour. They are slow in aging, slow in being attacked by disease and have offspirings of similar qualities in great number and are long lived. Cs. vi. 8. 111.

अतो विपरीतास्त्वसाराः।।
मध्यानां मध्यैः सारविशेषैर्गुणविशेषा व्याख्याता भवन्ति।।

The qualities contrary to what have been described indicate imperfect tone of the elements. If the tone of the elements is of a moderate nature, the qualities too are defined as of a moderate nature of the tone. Cs. vi 8. 112, 113.

67. इति साराण्यष्टौ पुरुषाणां बलप्रमाणविशेषज्ञानार्थमुपदिष्टानि भवन्ति।।

The perfect tone of the eight elements has been thus described in order to enable a special knowledge of a person's strength or vitality. Cs. vi. 8.114.

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कथं नु शरीरमात्रदर्शनादेव भिषङ् मुह्येदयमुपचितत्वाद्बलवान्, अयमल्पबलः कृशत्वात्, महाबलोऽयं महाशरीरत्वात्, अयमल्पशरीरत्वादल्पबल इतिः दृश्यन्ते ह्यल्पशरीराः कृशाश्चैके बलवन्तः; तत्र पिपीलिकाभारहरणवत् सिद्धिः। अतश्च सारतः परीक्षेतेत्युक्तम्।।

Why ? For, otherwise, by merely looking at the body (but not scrutinising the tone), a physician may conclude mistakenly that this (patient) is strong because of robustness, weak because of emaciatedness, very strong because of a big body, very weak because of a small slight body. (It is to be noted here that) some are seen to be strong (but) slight in body and emaciated; they are like the ant which carries great loads. That is why it has been said that the patient should be examined by the tone of his elements (and not merely by external appearance). Cs. vi 8. 115.

(iii) *in terms of the compactness of the body, make-up or the build*

68. संहननतश्चेति संहननं, संहतिः, संयोजनमित्येकोऽर्थः। तत्र समसुविभक्तास्थि, सुबद्धसन्धि, सुनिविष्टमांसशोणितं, सुसंहतं शरीरमित्युच्यते। तत्र सुसंहतशरीराः पुरुषा बलवन्तः, विपर्ययेणाल्पबलाः, मध्यत्वात् संहननस्य मध्यबला भवन्ति।।

As regards compactness, well-knit, well-composed, and well-united are synonymous and all mean the same. That is called a good compact body where the bones are symmetrical and well distributed, joints well-bound, flesh and blood well settled and penetrating. Persons of good compact body are strong; the contrary are weak, the moderately compact are (only) moderately strong. Cs. vi. 8. 116.

(iv) *in terms of the proportions of the body*

69. प्रमाणश्चेति शरीरप्रमाणं पुनर्यथास्वेनांगुलिप्रमाणेनोपदेक्ष्यते उत्सेधविस्तारायामैर्यथाक्रमम्। तत्रायुर्बलमोजः सुखमैश्वर्यं वित्तमिष्टाश्चापरे भावा भवन्त्यायत्ताः प्रमाणवति शरीरे; विपर्ययस्त्वतो हीनेऽधिके वा।।

In terms of proportion means the proportions of the body as taught in terms of the inches of the finger of the person concerned, in height, breadth and length, respectively. Long life, strength, vitality, happiness, power, wealth and other desirable qualities are dependent on the proper proportions of the body. The contrary qualities characterise the body that falls short of or exceeds these proportions. Cs. vi. 8. 117

(v) *in terms of the psyche*:

70. सत्वतश्चेति सत्वमुच्यते मनः। तच्छरीरस्य तन्त्रकमात्मसंयोगात्। तत्त्रिविधं बलभेदेन - प्रवरं, मध्यम्, अवरं चेतिः अतश्च प्रवरमध्यावरसत्वाः पुरुषा भवन्ति। तत्र प्रवरसत्वाः सत्वसारास्ते सारेषूपदिष्टाः, स्वल्पशरीरा ह्यपि ते निजागन्तु निमित्तासु महतीष्वपि पीडास्वव्यथा दृष्यन्ते सत्वगुणवैशेष्यात्; मध्यसत्वाः तु अपरानात्मन्युपनिधाय संस्तम्भयन्त्यात्मनाऽऽत्मानं परैर्वाऽपि संस्तभ्यन्ते; हीनसत्वास्तु नात्मना नापि परैः सत्वबलं प्रति शक्यन्ते उपस्तम्भयितुं, महाशरीरा ह्यपि ते स्वल्पानामपि वेदनानामसहा दृश्यन्ते, सन्निहितभयशोकलोभमोहमाना रौद्रभैरवद्विष्टबीभत्स विकृतसंकथास्वपि च पशुपुरुषमांसशोणितानि चावेक्ष्य विषादवैवर्ण्यमूर्च्छोन्माद भ्रमप्रपतनानामन्यतममाप्नुवन्त्यथवा मरणमिति।।

In terms of psyche means; psyche is (also) called mind; this is the controller of the body, because of its conjunction with the Self (i.e. soul). This is of three kinds by the differences in strength: high, moderate and low; hence, there occur persons of high, moderate and low psychic strengths.

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Of them those of high psychic quality are of the perfect psychic tone as described in (our account of measuring the patient) in terms of tones. Though of small body, they look unaffected even in great tormentations of (diseases) caused by endogenous or exogenous reasons; because of the speicality of their (high tone of the) psychic quality.

But, those of low psychic quality are not capable of composing their mind either by themeselves or with the help of others. Though of great bodies, they are seen to be intolerant of bearing even small amount of pains. When confronted with fear, sorrow, temptation, delusion or disgrace or made to listen to tales of wrath, awfulness, hate, horror or ugliness or see sights of the flesh and blood of animals and men, they suffer either depression of spirits, or pallor or fainting or insanity or giddiness or falling or even death. Cs. vi. 8. 111

(vi) *the utility of examination*

परीक्षायास्तु खलु प्रयोजनं प्रतिपत्तिज्ञानम्। प्रतिपत्तिर्नाम यो विकारो यथा प्रतिपत्तव्यस्तस्य तथाऽनुष्ठानज्ञानम्।।

The utility of the examinations (as detailed above) is the determination of the line of treatment. The line of treatment is the knowledge thereof, accordingly. Cs. vi. 8.132.

प्रवृत्तिनिवृत्तिलक्षणसंयोगे तु गुरुलाघवं संप्रधार्य सम्यगध्यवस्येदन्यतर निष्ठायाम्। सन्ति हि व्याधयः शास्त्रेषूत्सर्गापवादैरुपक्रमं प्रति निर्दिष्टाः। तस्माद्गुरुलाघवं संप्रधार्य सम्यगध्यवस्येदित्युक्तम्।।

In a condition where the indications for administration and avoidance of administration (of a medicine) are both present, the physician should weigh the relative strength of both the symptoms and decide in favour of whichever symptoms overweigh the other. For, there are diseases described in scientific treatises, described in their general as well as exceptional natures, for the purpose of treatment. Therefore, it is stated that one should properly weigh the relative vehemence and lightness of the symptoms and then (alone) determine the line of treatment. Cs. vi. 8. 134.

(f) *vitiations or dosic physiology and its clinical overtones.*
(i) *a few preliminary statements*

71. दूषणस्वभावत्वाद्द्वेषः, दूषयति नाम विकारं जनयतीति दोषः।

Because of its nature of vitiating, it is (called) a vitiation; because it generates a morbidity, it is a vitiation. A. samg. su. 20. 3.

तत्संख्या - वायुः पित्तं कफश्चेति समासतस्त्रयो दोषाः।

Their number: *vayu, pitta* and *kapha* - thus, in brief, there are three vitiations Cs. su. 1. 57

रक्तस्यापि दोषत्वं सुश्रुतवचनाधारेण पूर्वटीकाकारैराषाढधर्मदासादिभिः स्वीकृतमस्ति।

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A vitiating nature is accepted even for blood, on the authority of the words of Susruta, by commentators of the past such as, Asada, Dharmadasa and the like. Madhukosa. Madhava Pancanidāna.

तत्र वायौ, वा गतिगन्धनयोरिति धातुः। पित्ते, तप सन्तापे इति। श्लेष्मणि, श्लिष आलिंगने इति। एतेषां कृद्विहितैः प्रत्ययैर्वातः पित्तं श्लेष्मा इति च रूपाणि भवन्ति।

Therein, (as regards the terms) '*vayu*' (its implication comes from the root) *vā* (which stands) for motion and smell; '*pitta*'; (is so called, from its root) *tapa* meaning (that which causes a) heating; (and, as regards) '*śleṣma*' (it is from the root) *śliṣ* meaning (that which is responsible for) embracing, or rather, clinging. By (adding the necessary) affixies to these radicals, the (final) form of these terms will be come *vāta, pitta* and *kapha*. Ss. su. 21.5

पंचमहाभूतेभ्यः अविकृतानां वातादिदोषाणामुत्पत्तिः, तत्र वाय्वाकाशधातुभ्यो वायुः आग्नेयं पित्तम्, अम्भः पृथिवीभ्यां श्लेष्मा।

(*origin*:) It is from the non-denatured five primordial elements that there occurs the origin of the vitiations of *vāta* and the like. Therein, *vāyu* is from the element of Air and Sky. *Pitta* is of the nature of Fire. *Slesma* is from Water and Earth. A. samg. su. 20.3

त्रिदोषाः सर्वदेहचराः सर्व देहव्यापिनश्च सन्ति। तत्रापि हृदयादूर्ध्वं कफो विशेषेण, पित्तं हृदयनाभ्योर्मध्य भागे वायुर्नाभेरधो भागे च तिष्ठति। पुनश्च पक्वाशय कटीसक्थि श्रोत्राऽस्थि स्पर्शनिन्द्रिय स्थानं वातस्य, तत्रापि पक्वाधानं विशेषतः। नाभिरामाशयः स्वेदो लसीका रुधिरं रसो दृक्स्पर्शनं च पित्त स्थानानि, नाभिस्तत्र विशेषतः। उरः कण्ठ शिरः क्लोमपर्वाण्यामाशयो रसो मेदो घ्राणं जिह्वा च कफस्थानानि तत्रोरस्तु विशेषतः।

(*The places of the non-denatured vitiations*:). The three *doṣas* move about in the whole of the body and they pervade the whole of the body. Still however, *kapha* is specially (active and) stationed (in the region) above the heart; *pitta* in the mid-region of the heart and the navel; *vāyu* below the navel. And again, the places of *vāta* are: the loins, the thighs, the hearing organ, the bone and the organ of touch. The places of *pitta* are the region of the digested food (viz. the intestine?) specially navel, the region of the undigested food (viz., the stomach), sweat, lymph, blood, nutritive fluid, eye, skin (the region of touch) and particularly, navel. Chest, neck, head, lung, joints, stomach, nutritive fluid, fat, nose, tongue and paticularly the chest, are the places of kapha. Ahr. su. 12. 1.3.

अहो रात्रि भुक्तानामन्तमध्य प्रथम कालेषु क्रमशो वात पित्त कफानामुत्पत्तिर्वृद्धिर्वा भवति। तथा बाल्ये कफस्य यौवने पित्तस्य वार्धक्ये वातस्य च वृद्धिर्भवति।

In the day, the night, after the meals, at the end, in the middle and at the beginning respectively, there will occcur a generation or an increase of *vāta, pitta* and *kapha*. Similarly, there will be an increase of *kapha* in childhood, *pitta* in youth and *vāta* in old age. A.hr. su. i.8

वायोर्ग्रीष्मे चयो, वर्षासु प्रकोपः शरदि प्रशमश्चः पित्तस्य वर्षासु चयः शरदि प्रकोपो हेमन्ते प्रशमश्च।

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For *vāyu* (there occurs) a gathering together or consolidation at summer, provocation in the rainy season, and alleviation at the autumn. For *pitta*, consolidation is at the rains, provocation in autumn and alleviation in *hemanta* (winter). For *śleṣma*, consolidation is at the autumn, provocation in spring and alleviation in summer. Ah. su. 12. 24-27.

वातेन विषमोऽग्निः पित्तेन तीक्ष्णः कफेन मन्दश्च भवति। समैर्दोषैः समोऽग्निः भवति। कोष्ठोऽपि वातेन क्रूरः पित्तेन मृदुः कफेन मध्यः समैरपि दोषैश्च मध्य एव भवति।

By *vāta* (vitiation or excess), digestive power becomes unequable, by *pitta*, sharp, by *śleṣma*, feeble. By an equability of the vitiations, the digestive power also becomes equable. The viscera also becomes intolerable (lit. cruel) by vata (provocation or excess), soft by pitta, medium, by kapha; and medium itself, by an equableness of the vitiations. Ahr. su. 1.8.3

अविकृत दोषकर्माणि उत्साहोच्छ्वास निःश्वास चेष्टावेग प्रवर्तनैर्धातूनां सम्यग्गत्या अक्षाणां पाटवेन चाविकृतो वायुर्देहमनुगृह्णाति। अविकृतं पित्तं पक्त्यूष्म दर्शनैः क्षुतृड् रुचिप्रभा मेधाधी शौर्यतनुमार्दवैर्देहमनुगृह्णाति। अविकृतः श्लेष्मा स्थिरत्व स्निग्धत्व सन्धिबन्धक्षमादिभिर्देहमनुगृह्णाति।

(The (physiological) activities of non-denatured vitiations:) The non-denatured *vāta* favours the body with enthusiasm, inhalation and exhalation, gesticulation, speed, activity, proper dynamics of the body-constituents, and the expertness of the eyes (*and* other sensibilities). The non-denatured *pitta* favours the body with digestion, development of (proper) warmth (or, heat), hunger, thirst, taste, lustre, brilliance of mind, intelligence, bravery and softness of the body. The non-denatured *śleṣma* favours the body with stability, unctuousness, binding at the joints and a spirit of forgivigness. Ahr. su. 11. 1-3

कार्श्यकार्ष्ण्योष्णकामित्वादीनि वातस्य, पीतविण् मूत्रनेत्रत्वगादीनि पित्तस्य, अग्निसदन प्रसेकाऽऽलस्य गौरवदिनि श्लेष्मणश्च।

(*The (physiological) activities of the denatured vitiations:*) Emaciatedness, darkness (of complexion), desire for hot (things) arise-by *vata*. Yellowness of the urine, the stools, the eye, the skin and the like by *pitta*. A sinking down of digestive power, nausea, laziness, heaviness and the like - by *śleṣma*. Ahr.su.11.5.7

क्षीणा बृंहयतिव्याः, कुपिताः प्रशमयितव्याः, वृद्धा निहिर्तव्याः समाः परिपाल्या इति।

(*A general clinical guidance*:) (A vitiation) that is feeble should be augmented; the provoked, to be palliated; the (too much) increased, to be removed out; the equable, to be protected. SS. ci 33. 3

(ii) *some details*

(Because of the cardinal importance of the *doṣic* physiology to understand Ayurvedic therapy, a rather elaborate attempt to familiarise it to modern readers is presented as follows. The stress given to constitutional variation depends on the observation that this is probably the main reason why different persons react differently to the same pathogenic factor or the same drug. A modern reader finds

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the basic terminologies here as ubiquitously vague, unless he appreciates the logic behind. To categorise the actions of a substance within the body as strong or mild is quite logical even now. To denote them as fiery *āgneya* or gentle *saumya* is also understandable and to name them technically as partaking of the principle of fire or of the moon, the two familiar examples of what is very severe or what is very soft, is also justifiable. If one does not appreciate such a clearly possible rationality underlying the technical usage of the familiar terms, fire and moon and consider that here is but an instance of crude primitivity and their authors were actually thinking of a fire-god in *jaṭharāgni* and moon-god, etc. it would be just misreading, irrelevant and to wholly ignore the valid generalisation of a vast datum that actually underlines the technical terms, *āgneya* and *saymya*. Such an explanation holds good for all the terms such as *āgneya, prthvi, rajas, vāyu* , etc. which form the main fabric of thinkiing in Ayurveda. Though every one of the terms should be fully explained in English thus, it is better to retain however the Sanskrit terms themselves as *pṛthvi, rajas, vāyu* etc. to adequately denote all that their authors meant, when we write on ayurveda in English.

The entire material entity - which naturally excludes the Indweller or the *śarīri* or *ātma* or the Self or Soul, which is non-material - is divided by their authors as made up of five basic and elemental principles that have come about by an act of happening viz. bhuta - panca maha bhutas : i) that which is gross, ii) that which is liquid, iii) that which is an energy, iv) that which is subtle and always moving about and v) that which is spreading and connotes a free, open area or vacuity viz. space. On the analogy as above, they named, these principles respectively as follows by a familiar entity in every case: 1) Earth, *pṛthvi,* ii), water, *āp,* iii) Effulgence or Energy, *tejas,* iv) Air, *vāyu* and v) Space or Sky, *ākāśa* . They also proceeded to refer the principles themselves by these entities or their lexical alternatives as *salila* (for water), *pavana* and *māruta* for air and so on. We often get a straight forward and often direct meaning by closely adhering to the etymology of the terms. For instance, the term *'vāyu'* is derived from the root *vā* that signifies going or moving about. Hence it stands for the principles of regulation of movement within the body viz. neuromuscular phenomenon. In this way, we would be nearest to the original authors who coined their terms in strict compliance to their etymology and due value to the radicals or the *dhātus*).

Tridosa theory, the basis of Ayurveda is a clear indication that nearly three thousands of years back, disease was not considered by these experts as something supernatural and therefore beyond reasoning. Instead, it was due to an upset of the balance of three clearly recognised operative factors, *vāta, pitta* and *kapha* whose restoration to the premorbidity state constitutes the work of medicine).

(1) *the basic components of the body* (a) *dosas:*

72. दोषधातुमलमूलं हि शरीरं, तस्मादेतेषां लक्षणमुच्यमानम् उपधारय।।

We shall now discourse on the science of the decrease and increase of vitiation (*doṣa*), constituent (*dhātu*) and impurity (*mala*). These form the (very) root of the body. Therefore, listen to their characteristics as I shall tell. Ss. su. 15.3

(*Doṣa* in an operative principle working towards the maintenance of a dynamic balance. This necessarily exists in a living body - not in a dead stone which will have a constituent, a *dhātu,* but neither a *doṣa* - a vitiator, that would corrupt it as

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the state of imbalance, if not removed or rectified, nor a *mala* which is a necessary but a useless waste and always corrupting, if not removed. These latter two, viz., *doṣa*, and *mala* characterise only a living body. *Doṣa* is a physiological principle, i.e., one which has an integral role in the body's operativity while living, while *mala* is an impurity that necessarily results out of the act of living viz., physiology. In any living body and as long as life exists in it therefore, there will always be these three components : *doṣa, dhātu,* and *mala*. In fact, there is no body itself other than these three constituents. In other words, it is these three alone that make up the body. Of these, doṣa is a principles that works for the maintenance of the body. As such, it has to operate in an optimum tempo - either a decrease or the increase of it beyond this level will upset the balance and thus lead to vitiation of the body as a whole. Hence the principle itself is referred to as a *doṣa* - from the root *duṣ*, spoil, corrupt, vitiate, since this vitiating aspect is the reason by which it itself becomes evident, operatively; otherwise it does not come into notice at all. Then alone some characteristic syndromes develop that are obvious, easily classifiable and utilisable by the physician.

In the *doṣa*, three further supervening differentiations have been isolated, recognised and designated by their simple common sense counterparts in nature as wind, fire and water, *vāta, pitta* and *kapha*. Every one of them is an operative principle that may have many individual factors in turn, physical or chemical, as we may now state or discover. It is not a simple, much less, a single physical entity and -or the crude counterpart of wind, fire and water as such, existing within the human body. To presume therefore, that by *jatharagni* is meant an actual fire with flames in the stomach is to read Susruta dully and miss the very specific and quite valid technical connotation here. This connotes all the factors that help in digestion within stomach whether it is called *jaṭharāgni* or the enzymatic complex poured into the stomach and working for the digestion. Calling this as a fire is simply Susruta's style of saying. Any factor that causes motion in the body is signified by the terms wind or *vāyu* which is the most familiar moving entity of nature: the air in motion. Similarly, any factor that causes cooking, viz., the commonest and the most familiar chemical action, is named the *pitta*. The factor that causes sticking together or flooding (as in water) is designated the *śelṣma*. The gross counterparts of these two are fire and water whose lexical alternatives (*agni, jala,* etc.) thus often form their other technical names in the Text. In the background of the whole range of the physiological activities ascribed to these three in the Text it would not be incorrect to say that in broad outlines, *vāyu* and its functions corrospond to what we understand now as endocrinological, neuromuscular and nervous activities - all those that cause the major or the the gross dynamics of life, *pitta* refers to the chemical functions in general and *kapha* to the physical forces such as cohesion, lubrication, etc. Under everyone of these three *doṣic* factors, further functional specialisations have also been recognised and designated. With some amount of imagination, we can ourselves devise modern counterparts and chemicals for all of these operative entities.

To correlate these key concepts with what we now understand of human physiology we can broadly state as follows. *Vayu* stands for the neurological and the endocrinologiical activities, viz., those that cause a sensation (and thus also, pain) or are responsible for remote action, though, in matters of dietetics *vatala* foods are those that cause gas formation. Pitta stands for chemical activities in general or the *rasa kriya*. *Śleṣma* is that which brings about a physical activity at a

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stationary place such as cohesion or absorption at a surface. The latter two are essentially regional and localised, the spread of them or even the effect of them on other regions is due to the intervention of the first principle or the *vata* which is therefore *the* key factor in causing a disease. In the section dealing with the theory of diseases for e.g., the Nidāna Sthāna, there is therefore an account for only *vata vyādhi*, neither for the *pitta* nor the *śleṣma*.)

73. तत्र प्रस्पन्दनोद्व्हनपूरणविवेकधारणलक्षणो वायुः पंचधा प्रविभक्तः शरीरं धारयति।

Therein, the *vayu* maintains the body, being divided (itself) into five (separable functions) (i) palpitation (as in the heart and the coursing of the blood), (ii) transport (as in the movement of the *rasa* from the heart to the different regions of the body), (iii) filling (as in the filling of air into the lungs), (iv) separation (as when *rasa, mutra* or urine and *mala* or impurity are separated from the *dhātu* the constituent) and (v) retention (as when the semen, *mūtra* and *mala* are retained before release).

रागपक्त्तयोजस्तेजोमेधोष्मकृत् पित्तं पंचधा प्रविभक्तमग्निकर्मणाऽनुग्रहं करोति।
सन्धिसंश्लेषणस्नेहनरोपणपूरणबलस्थैर्यकृच्छ्लेष्मा पंचधा प्रविभक्त उदककर्मणाऽनुग्रहं करोति।

Differentiated (similarly) into five (functional specalisations), the *pitta* favours (the body) with its *agni karma* (viz., chemical action, such as): (i) colouring (as in pigmenting blood in the spleen and the liver), (ii) cooking (as in digesting food), and (iii) bestowing lustre (as in conferring the *ojas*), or (iv) causing intelligence (as in mental vigour or *medhas*) or (v) heat (as in the rise of temperature in inflammation or in fever). The *śleṣma* (also) favours (the body) with its *udaka karma* (viz., action like that of a liquid such as): (i) coupling at the joints (as in greasing the muscle with fat), (iii) healing (where the broken tissues join up), (iv) filling (as in giving shape to the body by appropriate padding and causing strength and firmness). Ss. su. 15.4

(b) *dhātus*:

(A *dhatu* is a constituent of the body. In fact it is this that composes the body proper, for *doṣa* is merely an operative principle made up no doubt by some specific working together of these *dhatus* themselves while *mala* is but an impurity that arises by the way and during the processes of the working up of the *doṣa*. *Doṣa* vitiates the body only when it is either more or less than that of the optimum, but is a factor always present in the body. There is no question of it being expelled, the only action to be done is to being it back to the optimum level, which is its natual state, *sahaja sthiti*. But *mala* on the contrary has to be removed from the body, as it is wholly a waste product, as far as the body is concerned. It is a temporary product though after its removal, fresh *mala* will again arise. In fact, it is the absence of its removal or formation that may lead to the disease and not its presence itself which cannot be helped.

Seven *dhātus* have been recognised, *rasa, rakta, māmsa, medas, asthi, majja* and *sukra*. Of these, *rasa* is the first, the rest being but its transmutation by the reactions of the body in this order and over these several steps. *Rasa* is the essence of food that the body understands as taste; *rakta* is blood; *mamsa*, the flesh;

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medas, the fat; *asthi*, the bone; *majja*, the bone-marrow and (finally) *śukra*, the semen or the *ārtava*, the oestrum being its female counterpart.

(What role do these seven dhātus play?)

74. रसस्तुष्टिं प्रीणनं रक्तपुष्टिं च करोति, रक्तं वर्णप्रसादं मांसपुष्टिं जीवयति च, मांसं शरीरपुष्टिं मेदसश्च, मेदः स्नेहस्वेदौ दृढत्वं पुष्टिमस्थ्नां च अस्थीनि देहधारणं मज्ज्ञः पुष्टिं च, मज्जा स्नेहं बलं शुक्रपुष्टिं पूरणमस्थ्ना च करोति, शुक्रं धैर्यं च्यवनं प्रीतिं देहबलं हर्षं बीजार्थं च।।

Rasa serves to cause contentment, pleasure and the nourishement of the blood. Blood provides a grace of coloration (to the body); it also nourishes the flesh and in fact is the factor for making the *puruṣa*, i.e. human person, alive (at all). Flesh fosters the body as well as the fat. Fat is responsible for the unctuousness in the body, generating the sweat, causing a firmness of the body and (it) also nourishes the bone (in its turn). Bone supports the body and nourishes the marrow, while the latter gives a (general) grace, suppleness and strength to the body (as a whole) and also nourishes the semen and (in addition fills up the bone (i.e. it is found in the central core of the bone). The seminal fluid gives bravery and courage, and is responsible for (causing) ejaculation. It serves for (conferring a) composure, a strength and a joy (to the individual *puruṣa*) and is also acting as the seed for reproduction. Ss. su. 15, 4.1

c. *malas*:

75. पुरीषमुपस्तम्भं वाय्वग्निधारणं च, बस्तिपूरणविक्लेदकृन्मूत्रं, स्वेदः क्लेदत्वक्सौकुमार्यकृत्; रक्तलक्षणमार्तवं गर्भकृच्च, गर्भो गर्भलक्षण, स्तन्यं स्तनयोरापीनत्वजननं जीवनं चेति।

तत्र विधिवत् परिरक्षणं कुर्वीत।

Malas are three: *purīṣa* or the stools, *mūtra* or the urine and *sweda* or the sweat.

Purīṣa acts as a stay to the body. It maintains the principle of *vāyu* and *agni*. *Mūtra* fills up the bladder and moistens. Sweat also moistens (and cools) and is besides, responsible for making (the body) tender and delicate. Ss. su. 15.4.2.

The oestrous blood (*ārtava*) in the woman is having the characteristic of the blood (elsewhere) but in addition, it cause the *garbha* or the gestation. The embryo causes (i.e., brings about) the characteristics of pregnancy. The milk generated in the breasts (the *stanya*) causes the drinkability of the breasts and is responsible for the life (of the child). (These two viz., the embryo and the milk are the *upadhātus* or the minor constituents that are present only on occasions, unlike the other seven primordial or *pradhāna dhātus* which are 'always' present).

Guard well all of them (viz., the three *doṣa*, the seven constituents of the *rasa*, *rakhta*, etc. the *malas* and the two upadhatus). Do so as per the strict injunction of the *śāstras*. ss. su. 15.2.6.

(2) *the clinical manifestations of the variations in the components*:

(a) *decrease:*

76. अत ऊर्ध्वमेषां क्षीणलक्षणं वक्ष्यामः। तत्र, वातक्षये मन्दचेष्टताऽल्पवाक्त्वमप्रहर्षो मूढसंज्ञता च, पित्तक्षये मन्दोष्माग्निता निष्प्रभता च, श्लेष्मक्षये रुक्षताऽन्तर्दाह आमाशयेतश्लेष्माशयशून्यता सन्धिशौथिल्यं (तृष्णा दौर्बल्यं प्रजागरणं) च।।

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We shall henceforth expatiate upon the symptoms of the decrease of these (three) factors in the body (viz., *doṣa, dhātu* and *mala*).

(*doṣas*): The decrease of *vata* (from its optimum level) leads to a general dullness in activity. The patient talks little, is cheerless and appears (as if he is) a dullard. The decrease of *pitta* renders him of dull warmth as well as of a dullness in his digestive capacity. He will be of a lack lustre (type) in appearance also. Decrease in *śleṣma* leads to roughness (of the body), an internal burning, an emptiness in his *āmāśaya* or stomach as well as other rceptacles of *śleṣma* in his body, a looseness in the joints, thirst, weakness and a continuous wakefulness (or loss of sleep). Ss. su. 15.7.

(*a hint for therapy*:)

77. तत्र स्वयोनिवर्धनान्येव प्रतीकारः।

The measure to counteract the effects of these decreases is to increase the dosa concerned (i.e. promote *vata* by suitable substances, if that is less and so on). Ss. su. 15.8.

78. रसक्षये हृत्पीडाकम्पशून्यतास्तृष्णा च, शोणितक्षये त्वक्पारुष्यमम्लशीतप्रार्थना सिराशैथिल्यं च, मांसक्षये स्फिग्गण्डौष्ठोपस्थोरुवक्षः कक्षापिण्डिकोदर ग्रीवाशुष्कता रौक्ष्यतोदौ गात्राणां सदनं धमनीशैथिल्यं च, मेदःक्षये प्लीहाभिवृद्धिः सन्धिशून्यता रौक्ष्यं मेदुरमांसप्रार्थना च, अस्थिक्षये अस्थिशूलं दन्तनखभंगो रौक्ष्यं च, मज्जक्षयेऽल्पशुक्रता पर्वभेदो अस्थिनिस्तोदोऽस्थिशून्यता च, शुक्रक्षये मेढ्रवृषणवेदनाऽशक्तिर्मैथुने चिराद्व प्रसेकः प्रसेके चाल्परक्तशुक्रदर्शनम्।

(*dhatus*) A decrease in *rasa* would lead to a (sense of) oppression of the heart (chest region), tremors (in the body or extremities), a (feeling of) emptiness (in the stomach or the body as a whole) and thirst. Decrease in *blood* would lead to roughness of the skin, a desire for sour and cold and a flaccidity in the veins. Decrease of flesh would lead to an emaciation of the buttocks, the cheeks, the hips, the loins, the chest, the thigh, the axil, the penis, the belly and the neck (i.e., *these are the places where the decrease of flesh leaves its prominent symptoms*). There is a general roughness, a needle-pricking pain, an exhaustion all over the body and a flaccidity of the arteries. Because of a decrease in the fat, there will be an overgrowth of the spleen, a feeling of emptiness among the joints, a (general) roughenss (all over the body) and a desire for oily or unguent foods as well as meat foods. Because of decrease in the bones, there will be a pain in the bones, a brittleness in the teeth and nails as well as a (general) roughness (all over). Where there is a decrease in the *marrow*, the quantity of the semen generated will be less, a cracking of knuckles at the joints (as well as a) pain in the bones as if needles are being pricked (there) occur and (a feeling of) an emptyness among the bones (prevails). By a decrease in the *semen* arises pain in the penis and the testicls, an incapacity in cohabitation, or, ejaculation only after a long time or an accompaniement of some blood and whiteness in the ejaculate. Ss. su. 15.9.

79. तत्रापि स्वयोनिवर्धनद्रव्योपयोगः (प्रतीकारः)।

(*a hint for therapy*): Here also, the method to counteract is to utilise the materials that increase the factor concerned. SS. su. 15.3.10.

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80. पुरीषक्षये हृदयपार्श्वपीडा सशब्दस्य च वायोरूर्ध्वगमनं कुक्षौ संचरणं च, मूत्रक्षये बस्तितोदोऽल्पमूत्रता च; अत्रापि स्वयोनिवर्धनद्रव्योपयोगः। स्वेदक्षये स्तब्धरोमकूपता त्वक्शोषः स्पर्शवैगुण्यं स्वेदनाशश्च; तत्राभ्यंगः स्वेदोपयोगश्च।

malas : When there is a decline in the quantity of the *stools* (from its habitual amount) there will ensue an oppressive pain on (either) side of the heart (chest?), an upward movement of the wind accompanied by a sound and also a wandering here and there (of this wind) within the belly. When there is a similar decline in the *urine* amount from its habitual level, there is a pricking pain in the bladder and the micturition (itself) occurs in small quantities.

(*a hint for therapy*) Here also the (measures of) counteraction is to administer materials that will augment the (formation of the *mala*) concerned.

If there is a decline in the (habitual level of the) *sweat* that would result in (causing a) closure of the pores of the hair follicles, a dryness of the skin, an abnormality in the feel of the skin when we touch it (*sparśa vaiguṇya*) and a total absence of sweating. In such a condition, rub the patient's body with unctuous substance (i.e., carry out inunction) and also administer sudation therapy. Ss. su. 15.11.

81. आर्तवक्षये यथोचितकालादर्शनमल्पता वा योनिवेदना च; तत्र संशोधनमाग्नेयानां च द्रव्याणां विधिवदुपयोगः। स्तनक्षये स्तनयोर्म्लानता स्तन्यासंभवोऽल्पता वा; तत्र श्लेष्मवर्धनद्रव्योपयोगः। गर्भक्षये गर्भास्पन्दनमनुन्नतकुक्षिता च; तत्र प्राप्तबस्तिकालायाः क्षीरबस्तिप्रयोगो मेद्यान्नोपयोगश्चेति।

When there is a decline in the *oestrous blood* amount, menstrual flow will not appear in the appropriate time and if the flow is there, the quantity will be meagre and (there wil also arise) a pain in the vagina. To overcome this, administer *agneya* (heat promoting) materials as prescribed. Decline in the quantity of *milk* would lead to a limpness in the breasts, a total loss or a meagreness in the milk. Utilise then the materials that will augment *śleṣhma*. Decrease in the *garbha* will lead to an absence of movement of the *garbha* and a flatness of the belly. Then, administer *kṣirabasti* when it is the time for parturition and also (give the patient) medhya (fat promoting foods). Ss. su. 15.12.

d. *increase* :

82. अत ऊर्ध्वमतिवृद्धानां दोषधातुमलानां लक्षणं वक्ष्यामः। वृद्धिः पुनरेषां स्वयोनिवर्धनात्युपसेवानादभवति। तत्र वातवृद्धौ वाक्पारुष्यं काश्यं काष्ण्यं गात्र स्फुरणमुष्णकामि (मं) ता निद्रानाशोऽल्पबलत्वं गाढवर्चस्त्वं च; पित्तवृद्धौ पीतावभासता संतापः शीतकामित्वमल्पनिद्रता मूर्च्छा बलहानिरिन्द्रियदौर्बल्यं पीतविण्मूत्रनेत्रत्वं च; श्लेष्मवृद्धौ शौक्ल्यं शैत्यं स्थैर्यं गौरवमवसादस्तन्द्रा निद्रा सन्धिविश्लेषश्च।

Henceforth, we shall narrate the characteristics of the excess of the *doṣa, dhatu* and *mala*. Such an excess would result (when the individual indulges in) consuming the substances that would increase them beyond the quantity that is required. Ss. su. 15.

(*doṣas* :) Excess of *vata* would lead to a harshness in speech, an emaciation of the body, a darkness of the skin, a throbbing of (the limbs of the) body, a (general) desire for heat (in food as well as elsewhere, for e.g. in the weather or his surroundings), a loss of sleep, a loss of strength and a solidity in the stools. Excess of *pitta* leads to a (general glow of) yellowness (in the body), a burning *(santapa)*

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in the body, a desire for cool things, a meagreness in sleep, a swooning, a decline in strength, a general debility of the senses and also an yellowness in the stools, the urine and the eyes. Excess of *śleṣma* leads to a (general) pallor (specially in the nails and the eyes), a coldness, a firmness, a heaviness, a depression (*avasāda* in the body as well as the mind), a langour, a sleepiness and (a pain as if there is) a splitting of the joints. Ss. su. 15.13.

83. रसोऽतिवृद्धो हृदयोत्क्लेदं प्रसेकं चापादयतिः रक्तं रक्तांगाक्षिता सिरापूर्णत्वं चः मांसं स्फिग्गण्डौष्ठोपस्थोरुबाहुजंघासु वृद्धिं गुरुगात्रतां चः मेदः स्निग्धांगतामुदरपार्श्ववृद्धिं कासश्वासादीन् दौर्गन्ध्यं चः अस्थ्यध्यस्थीन्यधि दन्तांश्चः मज्जा सर्वांगनेत्रगौरवं चः शुक्रं शुक्राश्मरीमतिप्रादुर्भावं च।।

(*dhātus* :) Excess of the *rasa* brings forth a moistening (*utkelda*) as well as effusion (*praseka*) of the heart. Excess of the *flesh* (would lead) to the overfull buttocks, cheeks, lips, loins, thighs, arms and shanks and also a (general) heaviness of the body. Excess of *fat* (would lead) to an unctuousness of the body, overgrown sides and belly, a coughing, a difficulty in breathing and a bad smell. Excess of *bone* would lead to the appearane of extra-bones (*adhyasthi*) and supernumerary teeth (*adhidanta*). Excess of marrow (would cause) a heaviness of the whole of body and also the eyes (specially). Excess of *semen* would cause seminal urinary calculus and an excess of the flow of the ejaculate. Ss. su. 15.14.

84. पुरीषमाटोपं कुक्षौ शूलं चः मूत्रं मूत्रवृद्धिं मुहुर्मुहुः प्रवृत्तिं बस्तितोदमाध्मानं चः स्वेदस्त्वचो दौर्गन्ध्यं कण्डूं च।।

(*malas* :) Excess of the *stools* would cause a (general) turbulence (*āṭopa*) as well as pain in the belly. Excess of *urine* would lead to very frequent micturition, shooting pain in the bladder and also a bloating (*ādhmāna*). Excess of *sweat* would cause a bad odour in the skin and also an itching. Ss. su. 15.15.

85. आर्तवमंगमर्दमतिप्रवृत्तिं दौर्गन्ध्यं चः स्तन्यं स्तनयोरापीनत्वं मुहुर्मुहुः प्रवृत्तिं तोदं चः गर्भो जठराभिवृद्धिं स्वेदं च।।

Excess of oestrum (causes) body pain, increased menstrual flow and a malodour. (Excess of) *milk* (causes) an overflow of the milk and an acute pricking pain. (Excess of) the *womb* (e.g., an over sized foetus) causes a great swollenness in the belly and too much of a sweating. Ss. su. 15.16.

(*a hint for therapy and a general guideline* :)

86. तेषां यथास्वं संशोधनं क्षपणं च क्षयादाविरुद्धैः क्रियाविशेषैः प्रकुर्वीत।

(In all of these cases) take such special measures that will eradicate the specific factor concerned or (at least) lessen it (considerably but) not to a degree that will cause the effects that would ensue if it decreases from its optimum level.

पूर्वः पूर्वोऽतिवृद्धत्वाद्ध्येद्धि परं परम्।
तस्मादति-प्रवृद्धानां धातूनां ह्रासनं हितम्।।

Because of its (already existing) over - increase, the antecedent factor will definitely augment what follows. Therefore, it is (always) salutary to decrease that factor which has undergone a greater increase. Ss. su. 15. 17, 18.

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(It is an interesting problem whether we can find now correlations between such clinical predictions to changes in physiolgocial constituion. Can we consider the clinical statements made here as at least points for further enquiry, corroboration and utilisation where possible? For instance, is it true that a decrease in blood (for e.g. during excessive haemorrhage) would lead to any appreciable roughness of the skin or a desire for sour and cold food or a flacidity in the veins, of which, the last proposition seems at least logically sound.)

(3) *clinical characteristics of the dosas*:

87. पित्तं पंगु कफः पंगु पंगवो मलधातवः। वायुना यत्र नीयन्ते तत्र वर्षन्ति मेघवत्।

Pitta is lame, *kapha* is lame and the impurities and the constituents are (also lame (i.e. the effects of their morbidity are not transportable from the region of their initial origin). They go wherever *vāyu* (*the neurological factor?*) takes (them) just like the clouds (that are moved about by the wind, the *vayu* in the outside world). Sharngadhara.

88. *Vāta*.
रुक्षलघु शीत दारुणखर विशदाः षडिमे वातगुणा भवन्ति।

Dry,. light, cold, severe, rough and clear – these six are the qualities of *vata* Cs. su. 12.4.

89. स तु पवंगुणैरेवंद्रव्यैरेवंप्रभावैश्च कर्मभिरभ्यस्यमानैर्वायुः प्रकोपमापद्यते, समानगुणाभ्यासो हि धातूनां वृद्धिकारणमिति।

This *vāta* attains aggravation when it is being assailed by qualities similar to itself, materials similar to itself and the influences and the activities, similar to itself. Similar qualities and practices are indeed the cause for further thriving. Cs. su. 12.5.

90. अतो विपरीतानि वातस्य प्रशमनानि भवन्ति, प्रकोपणविपर्ययो हि धातूनां प्रशम कारणमिति।

Whatever counter to these (qualities, materials, influences and activities), they become pacifiers to *vata*. Countering aggravation is the pacification of the constitutents. cs. su. 12.6.

91. यथा ह्येनमसंघातमनवस्थितमनासाद्य प्रकोपण प्रशमनानि प्रकोपयन्ति प्रशमयन्ति वा, तथाऽनुव्याख्यास्यामः – वात प्रकोपणानि खलु रुक्षलघु शीत दारुण खरविशदशुषिर कराणि शरीराणां तथा विधेषु शरीरेषु वायुराश्रयं गत्वाऽऽप्यायमानः प्रकोपमापद्यतेः वातप्रशमनानि पुनः स्निग्धगुरुष्णमृदु पिच्छिल घनकराणि शरीराणां तथाविधेषु शरीरेषु वायु रसज्यमानश्चरन् प्रशान्तिमापद्यते।

We shall comment now as to how the materials for aggravation and mitigation, aggravate this *vata,* not securing (i.e nullifying) this *vata* which is formless and fickle. The aggravators of *vata* are what make for (whatever that is) dry, light, cold, severe, rough, clear and hollow. Taking shelter in such constitutions, getting supported (lit. delighted), this (*vata*) attains aggravation. The pacificators of *vāta* are (what make for), viscous, heavy, hot, slippery, soft, slimy and solidifying (factors). In constitutions of this type, the *vata*, not getting any scope (for its activities) gets out and the mitigation is secured. Cs. su. 12.7.

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92. वायुस्तन्त्रयन्त्रधरः, प्राणोदानसमानव्यानापानात्मा, प्रवर्तकश्चेष्टानामुच्चावचानां नियन्ता प्रणेता च मनसः सर्वेन्द्रियाणामुद्योजकः सर्वेन्द्रियार्थानाम् अभिवोढा सर्वशरीर धातुव्यूहकरः सन्धानकरः शरीरस्य, प्रवर्तको वाचः, प्रकृतिः स्पर्शशब्दयोः श्रोत्रस्पर्शनयोर्मूलं, हर्षोत्साहयोर्योनिः, समीरणोऽग्नेः, दोषसंशोषणः क्षेप्ता बहिर्मलानां, स्थूलाणुस्त्रोतसां भेत्ता, कर्ता गर्भाकृतीनाम्, आयुषोऽनुवृत्तिप्रत्ययभूतो भवत्यकुपितः ।।

Vayu is the bearer of the mechanism and the machinery (of the body is, of the nature of *prana, udana, samana, vyana* and *apana* (the five subspecialities of the functioning); the effector of the activities - the high and the low, the controller and the leader; the employer of the mind and all the sense organs; the carrier of the meaning of all the sense-organs; the systematiser of the constituents of the whole of the body; the unifyer of the body; the effector of speech; the cause of (the sense of) touch and sound; the root of hearing and touch; the source of joy and enthusiasm; the wind (i.e. the activator, wafting the) digestive fire; the drier of morbidity; the thrower-out of the impurities; the divider of the gross and the subtle channels (of the body); the creator of the shape of the womb; and becomes the responsible cause in smooth passage of the span of life, when unprovoked. Cs. su. 12.8.

(*tissue level action of the vayu factor?*)

The molecules of *vayu* officiating in the activities of combination and division, divide the animating constituents at the visceral organs (that carry out) contraction and dispersion. Ks. Sa. Jatisutriya.3.

When *vāyu* takes up the activity of the nature of combining, then, it commences from carrying out a combination of the molecules (concerned), and when *vāyu* takes up the activity of the nature of dividing, then, it generates a division of the molecules (concerned). Chokra. Cs. sa.7. 17

93. कुपितस्तु खलु शरीरे शरीरं नानाविधैर्विकारैरुपतपति बलवर्णसुखायुषामुपघाताय, मनो व्याहर्षयति, सर्वेन्द्रियाण्यपहन्ति, विनिहन्ति गर्भान् विकृतिमापादयत्यतिकालं वा धारयति, भयशोकमोहदैन्यातिप्रलापांजनयति प्राणान् च उपरुणद्धि ।।

(*the upset vata:*)

The provoked *vata* torments the body by disorders of various kinds; causes dejection of the mind, so as to strike down the strength, the complexion, the happiness and the span of life; hits at all the sense organs; destroys the foetus; brings about deformities or maintains (such a distorted state) for a long time, generates fear, grief, infatuation, miserableness or incoherent speech; and (may) stop life. Cs. su. 12.8.

संकोचः पर्वणांस्तम्भो भेदोऽस्थ्नां पर्वणामपि।
लोमहर्षः प्रलापश्च पाणिपृष्ठशिरोग्रहः । खांज्य पांगुल्य कुब्जत्वं शोषोऽङ्गानामनिद्रता ।।
गर्भ शुक्र रजो नाशः स्पन्दनं गात्र सुप्तता। शिरोनासादिजत्रूणां ग्रीवायाश्चापि हुण्डनम् ।।
भेदस्तोदार्तिराक्षेपो मोहश्चायास एव च। एवं विधानि रुपाणि करोति कुपितोऽनिलः ।।

Contraction of the knuckles (of the fingers), stypsis, breakage, bone-fracture, horripilation, incoherent speech, seizure of hands, back and head, limping, lameness, dwarfism; dessication of the organs; loss of sleep; destruction of foetus, semen and oestrum; tremors in the body; benumbing of neck, head, nose, eye and clavicular region; generates (a sensation? of) rupture, pain, distress,convulsion, perplexity and fatigue; causes specialities of diseases depending on the specialities of the cause

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and the site (of the morbidity) - aggravated *vayu* brings this all. Cs. ci. 28.20-23.

सोम एव शरीरे श्लेष्मान्तर्गतः कुपिताकुपितः शुभाशुभानि करोतिः तद्यथा-दार्ढ्यं शैथिल्यमुपचयं कार्श्यमुत्साहमालस्यं वृषतां क्लीबतां ज्ञानमानं बुद्धिं मोहमित्येवमादीनि चापराणि द्वन्द्वानीति।

(*Kapha*). The moon (or the principle of *Kapha*) within the *śleṣma* itself brings about the good and the bad in the body when aggravated or not aggravated, respectively. This is as follows: steadiness or laxity; augmentation or emaciation (at the physiological level); enthusiasm or laziness; virility or impotency; knowledge or ignorance; intellect or bewilderment; and similarly other opposites (*at the psychological level*). Cs. su. 12.12.

g. *(bodily) strength, colour, vitality and aura*

(What is easily apparent in any living person for an overall physical observation is just these few obvious features : bodily strength, colour, vitality and aura or a hallow of light, though the recognition of the last is not very easy and its information in the classics is concerned more with its derangements and the consequent value as a *riṣṭa* or a sign of coming death. A clearcut recognition and consequent clinical evaluation of these three simple and obvious features is thus a tribute to the keen observing power of the ancients; characteristic variations in them depending upon a diversity of diseases they ensue from are also noticed. Quotations in this section are meant to illustrate these aspects. Even now, a simple and effective measure of diagnosing a disease is any abnormal variation in the habitual strength, colour and vitality of a person or any of his organs or the parts of his body.).

94. प्राणिनां पुनर्मूलमाहारो बलवर्णौजसां च।

The final basis of the strength, the colour and the vitality or the *ojas* of all living beings is the food that they take. Su. su. 1.28

बलं कर्मसाधनशक्तिर्व्यायामानुमेया, वर्णो गौरादिः, ओजः सोमात्मकं रसादिशुक्रान्तसर्वधातुधामभूतं हृदिस्थम्। अन्ये तु बलं शरीरोपचयोऽत्राभिप्रेत इति वदन्ति। एवं परमार्थतो बलौजसोर्भेदऽपि दोषधातुमलक्षयवृद्धिविज्ञानीये चिकित्सैक्यार्थमभेद उक्तः।

Strength is the energy to do work; it is to be evaluated by the (various) physical exercises (that the person can carry out). Colour is being fair and so on. *Ojas* is essentially of the *soma* element (i.e. an aspect of mildness) and represents the highest excellence of all the (seven constituents) of the body, commencing from *rasa* or the assimilable essence of the food consumed, upto the semen and is situated in the heart. Others consider that by strength is meant here the nourishement and augmentation of the body. Thus in the final sense, (i.e. in practical terms) even the diversity between strength and vitality is not (very) distinguishable from the knolwedge of decline and increase in variations, constituents and the impurities - as is made out for the sake of treatment (viz., *strength, vitality, vitiations, constituents and impurities -all these are inter-influencing factors* for health as well as diseases). Da. Ss. su. 1.28.

बलं त्रिविधं सहजं कालकृतं युक्तिकृतं चः
सहनंदेहसत्वयोः प्राकृतमु, कालकृतं ऋतुविभागजं वयः कृतं च,
युक्तिकृतं आहारविहारोत्थमूर्जस्करं योगजं च।

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(Strength) is of three kinds: natural, temporal and artful; natural, is what is habitual due to the (innate) capacities of the body, temporal is what is due to the time (of the day and) of the seasons as well as what is due to age and artful is what is due to the food, amusement and the taking in of invigorators and the tonics. (As. śā. 8.28);

95. सर्व धातु स्नेह भूतस्योपचयलक्षण स्यौजसौ रुपरसौ वीर्यादि च विद्यते, बलस्य तु भारहरणादि शक्तिगम्यस्य रसवीर्य वर्णादिगुणा न विद्यन्ते, अतो अनयोःभेदाऽस्त्येव इति।

In *ojas* which is a characteristic of the nourishement an augmentation of all the constituents of the body that have become oleated, there do occur form and viscidity and virility and the like. But, for strength which is assessable by the capacity to bear weight, there do not occur the qualities of viscidity, virility, colour and the like. There does occur thus a difference between the two (viz. vitality and strength). Da. Ss. su. 15.19.

96. ओजः सोमात्मकं स्निग्धं शुक्लं शीतं स्थिरं सरम्।
विविक्तं मृदु मृत्स्नं च प्राणायतनमुत्तमम्।।
देहः सावयवस्तेन व्याप्तो भवति देहिनः।
तदभावाच्च शीर्यन्ते शरीराणि शरीरिणाम्।।
अभिघातात्क्षयात्कोपाच्छोकाद्ध्यानाच्छ्रमात्क्षुधः।
ओजः संक्षीयते ह्येभ्यो धातुग्रहणनिः सृतम्।।
तेजः समीरितं तस्माद्विस्रंसयति देहिनः।।

Ojas (i.e., vitality or *joi de vivre*) partakes of the element of moon (i.e., in its mildness and gentility); it is unctuous (*snigdha*) white, cold, firm, supple (*saram*), quite discrete (*vivikta*), soft and the most excellent soil (*mrtsnam*), for all health and vigour. It is the best abode of life (viz., having an *ojas* is the best guarantee for a long, happy and healthy life). In the human person, this (*ojas*) pervades in each and every limb of him. When there is an absence of this *ojas*, the body starts getting disintegrated. This *ojas* undergoes a decline (*samksiyante*) because of injury, emaciation or consumption, anger, grief, brooding over, fatigue or hunger. Wafted away (*iritah*) by these (latter) causes and exuding out (*nihsrtam*) from the constituents (thereof), this *tejas* or the brilliance or the splendour undergoes a falling apart or a decreptiude (*visramsayati*) then onwards. Ss. su. 15. 21-23.

तस्य विस्रंसो व्यापत् क्षय इति (त्रयो दोषाः) लिंगानि भवन्ति संन्धिविश्लेपो गात्राणां सदनं दोपच्यवनं क्रियासन्निरोधश्च विस्रंसे, स्तब्धगुरुगात्रता वातशोफो वर्णभेदो ग्लानिस्तन्द्रा निद्रा च व्यापन्ने, मूर्च्छा मांसक्षयो मोहः प्रलापो मरणमिति च क्षये।

The defects that may arise in vitality (or *ojas*) are three: (i) a falling apart or decrepitude (*visramsana*), (ii) a derangement or an abnormality (*vyāpad*) and a (iii) wearing away or a decay (*kṣaya*). The (clinical) symptoms (of them, respectively) are as follows: A dislocation at the joints, a sinking down of the body, a displacement of the doṣas (from their habitual places, *dosacyavana* and), an improper or obstructed functioning of the body will result - when the vitality is decrepit. A stillness (*stabdhata*) and a heaviness in the body or morbid swelling due to *vata*, a change in the habitual coloration, a debility (*glāni*) and a sleepiness will

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ensue – if the vitality is deranged. A loss of consciousness or a swooning, an emaciation of the flesh, a bewilderment (*moha*), an irrelevant talking (*pralāpa*) and death (finally) will ensue – if the vitality is decayed. Ss. su. 15.24.

त्रयो दोषाः बलस्योक्ता व्यापद्विस्रंसनक्षयाः ।
विश्लेषसादौ गात्राणां दोषविस्रंसनं श्रमः ।।
अप्राचुर्यं क्रियाणां च बलविस्रंसलक्षणम् ।
गुरुत्वं स्तब्धताऽङ्गेषु ग्लानिर्वर्णस्य भेदनम् ।।
तन्द्रा निद्रा वातशोफो बलव्यापदि लक्षणम् ।
मूर्च्छा मांसक्षयो मोहः प्रलापोऽज्ञानमेव च ।।
पूर्वोक्तानि च लिंगानि मरणं च बलक्षये ।।

Abnormality, decrepitude and decay are (also) the three blemishes of strength. A dislocation, a sinking down in the body, a falling down (cyavana) of the *doṣas*, a fatigue, a feebleness (*apracurya*) in the (bodily) activities (for instance), like (defecation, micturition, breathing and blood flow) are the characteristics of the decrepitude in strength. A heaviness of the body, a stillness and a debility in the limbs, a change in the colouration, a langour, a sleepiness and morbid swellings of *vāta* are the characteristics of a deranged strength. A loss of flesh, a bewilderment, an irrelevant talk, a non-understanding and also the (many specific other) signs and symptoms spoken of earlier, and death (finally) are the (diagnostic) characteristics of the decay in strength. Ss. su. 15.25-28.

(We should not fail to note the so many details as well as the profundity in these seemingly simplistic statements. For we will realise only then that we need not attempt merely a naive correlation of all these with what exists now. We may as well go in for a bolder erection and a restatement of the matter as a whole on its own merit and do so with profit).

(*hints for theraphy*):

तत्र विस्रंसे व्यापन्ने च क्रियाविशेषैरविरुद्धैर्बलमाप्याययेत्; इतरं तु मूढसंज्ञं वर्जयेत् ।। दोषधातुमलक्षीणो बलक्षीणोऽपि वा नरः ।

स्वयोनिवर्धनं यत्तदन्नपानं प्रकांक्षति ।।
यद्यदाहारजातं तु क्षीणः प्रार्थयते नरः ।
तस्य तस्य स लाभे तु तं तं क्षयमपोहति ।।
यस्य धातुक्षयाद्वायुः संज्ञां कर्म च नाशयेत् ।
प्रक्षीणं च बलं यस्य नासौ शक्यश्चिकित्सितुम् ।।

In these cases of decrepitude and derangedness, take such special actions of augmenting the strength but in such a way as not to counteract (i.e., cause too much of an increase of this strength, viz., beyond the optimum level). Give up the others (i.e., the third category of decayed strength), specially if he is a dullard in his general sensibilities: he is untreatable.

One who is debilitated in his *doṣa, dhatu* and *mala* or in his (bodily) strength, would always very much desire such types of food and drink that would (naturally) increase that factor (from whose lack he is suffering). Whatever foods such a debilitated patient desires, those specific foods are profitable to him (and it is these again that) take away the debilitation concerned.

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The patient in whom the *vāyu* has destroyed his understanding capacity (*samgnām*) as well as the capacity to carry out his habitual bodily functions (*karma*) and because of which specific reason, his strength is very much wasted out – he cannot be treated. Ss. su. 15.28.31.

(ii) *clinical advice*:

97. रसनिमित्तमेव स्थौल्यं कार्श्यं च। तत्र श्लेष्मलाहारसेविनोऽध्यशन शीलस्याव्यायामिनो दिवास्वप्नरतस्य चाम एवान्नरसो मधुरतरश्च शरीरमनुक्रामन्नतिस्नेहान्मेदो जनयति, तदतिस्थौल्यमापादयतिः तमतिस्थूलं क्षुद्रश्वासपिपासाक्षुत्स्वप्नस्वेदगात्रदौर्गन्ध्यक्रथन गात्रसादगद्गदत्वानि क्षिप्रमेवाविशन्ति, सौकुमार्यान्मेदसः सर्वक्रिया स्वसमर्थः, कफमेदोनिरुद्धमार्गत्वाच्चाल्पव्यवायो भवति, आवृतमार्गत्वादेव शेषा धातवो नाप्यायन्तेऽत्यर्थमतोऽल्पप्राणो भवति, प्रमेहपिडका ज्वरभगन्दरविद्रधिवातविकाराणामन्यतमं प्राप्य पंचत्वमुपयाति, सर्व एव चास्य रोगा बलवन्तो भवन्त्यावृतमार्गत्वात् स्रोतसाम्; अतस्तस्योत्पत्तिहेतुं परिहरेत्। उत्पन्ने तु शिलाजतुगुग्गुल्गोमूत्र त्रिफलालोहरजोरसांजनमधुयवमुद्गकोरदूषकश्यामाकोद्दालकादीनां विरुक्षणच्छेदनीयानां च द्रव्याणां विधिवदुपयोगो व्यायामो लेखनबस्त्युपयोगश्चेति।।

The stoutness or the leanness of the body are due to the (vagaries of the) *rasa* or the assimilable essence of the food that the person takes.

(a) Herein, in a person who takes *śleṣmala* food habitually, eats before his previous food is digested (*adhyasana*), who does not take any exercises and has the habit of sleeping by day – his food is not fully digested and (continues to) remain in a raw state itself and is therefore more *madhura* (than what is optimal) and in this way (i.e., because of its sweetness) spreads all over the body and by its excessive unctuousness causes fatness. This (state of affairs) brings about an excessive stoutness. To such a very stout person, short breath, thirst, excess of hunger, sleepiness, sweating, malodour in the body, sudden loss of breath (*krathana*), tiredness in the body and indistinct speech (*gadgadatva*) will ovrepower quickly. Because of the tenderness of his fat, he is incapable of doing any (bodily) activity. His passages of the *kapha* and *meda* are blocked. As such, he is not very capable during cohabitation, and because of similar blocking itself, the other *dhātus* are also not flourishing very well; his life span gets reduced and (finally) he dies by getting some such diseases as *prameha* (urinary diseases), *piḍaka* (pustules of urinary afflications), *jvara* (fever), *bhagandara* (anal fistula), *vidradhi* (abscess), and abnormalities of *vāta*. Because his *srotas* or the transporting channels get blocked this way, all the diseases that he gets become powerful and severe.

(*a hint for therapy*) Therefore eradicate away the root cause (namely, the excess of fat).

In case (however you cannot remove the root cause like this and) the disease has actually come to him, administer the following materials as prescribed: *guggulu, triphala, yava, mudga, kora dūṣaka, syāmāka* and *uddālaka* and so on that can cause a drying (*virūkṣaṇa*) and a cuttng (*chedaniya*). Make the patient take exercises and apply scarificatory or *lekhana basti*. Ss. su. 15.32.

तत्र पुनर्वातलाहारसेविनोऽतिव्यायामव्यवायाध्ययनभयशोकध्यान-रात्रिजागरणपिपासाक्षुत्कषायाल्पाशनप्रभृतिभिरुपशोषितो रसधातुः शरीरमननुक्रामन्नल्पत्वान्न प्रीणाति, तस्मादतिकार्श्यं भवतिः सोऽतिकृशः क्षुत्पिपासाशीतोष्णवातवर्षभारादानेष्वसहिष्णुर्वात रोगाप्रायोऽल्पप्राणश्च क्रियासु भवति, श्वासकासशोषप्लीहोदराग्निसादगुल्मरक्तपित्तानामन्यतममासाद्य मरणमुपयाति, सर्व एव चास्य रोगा बलवन्तो भवन्त्यल्पप्राणत्वात्;

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अतस्तस्योत्पत्तिहेतुं परिहरेत्। उत्पन्ने तु पयस्याश्वगन्धाविदारिगन्धाशतावरीबलातिबलानागबलानां मधुराणामन्यासां चौषधीनामुपयोगः, क्षीरदधिघृतमांसशाल्यिषष्टिकयवगोधूमानां च, दिवास्वप्नब्रह्मचर्या-व्यायामबृंहणबस्त्युपयोगश्चेति।।

For a person who takes *vāta* increasing substances, does too much exercises, indulges in too much cohabitation, too much study and is subject to fear, grief, brooding, sleeplessness in the night, thirst, hunger and takes (too much of) astringent food (*rasa*) or eats too litte - his *rasa* and *dhātus* get dried because of these (and similar other) causes and pervade the body everywhere but cannot please it (still) since they are very small (and inadequate) in amount. He, therefore, becomes very lean. Such a lean man cannot bear hunger, thirst, coldness or heat, wind, rain or load. He is probably afflicted with *vata* diseases and is having very little vitality in all his activities. He is likely to get some such diseases as difficult breathing, cough, dessication (soṣa) *pliha* (glandular enlargement of the spleen), *udara* (enlargement of the abdomen), *agnisada* (weakness in digestion), *gulma* (glandular enlargement of the spleen or the abdomen) or *rakta pitta* (plethora) and die. All of his diseases become powerful because of his low vitality.

(*A hint for therapy*) Therefore, eradicate out the root cause namely, what has caused his leannes.

In case the disease has already occured use *madhura* medicines such as *payasya, asvagandha, vidārigandha, śatāvari, balā, atibalā* and *nāgabalā* and also milk, curds, ghee as well as rice, (specially) the *ṣaṣṭika* (variety), barley and wheat. He should sleep by day, practice celebacy, should not do any exercises and employ measures of augmentation (brhmana) enema (*basti*). Ss. su. 15.33.

यः पुनरुभयसाधारणान्यासेवेत तस्यान्नरसः शरीरमनुक्रामन् समान् धातूनुपचिनोति, समधातुत्वान्मध्यशरीरो भवति सर्वक्रियासु समर्थः क्षुत्पिपासाशीतोष्णवातवर्षातपसहो बलवांश्च स सततम् अनुपालयितव्य इति।।

(b) He who consumes what is common to both (i.e., neither *śleṣmala* not *vātala*), the essence of his food nurtures up (*upacinoti*) equitable *dhātus*. Because of such equitable (i.e., balanced) *dhātus*, his body becomes medium (neither stout nor lean) and is capable and efficient in all the activities. He can bear hunger, thirst, cold, heat, rains or sun and is (himself) strong. Ss. su. 15.34.

(*A hint for therapy*) He should be kept protected in this balanced way (alone) and always.

अत्यन्तगर्हितावेतौ सदा स्थूलकृशौ नरौ।
श्रेष्ठो मध्यशरीरस्तु कृशः स्थूलात्तु पूजितः।।
दोषः प्रकुपितो धातून् क्षपयत्यात्म तेजसा।
इद्धः स्वतेजसा वह्निरुखागतमिवोदकम्।।
वैलक्षण्याच्छरीराणामस्थायित्वात्तथैव च।
दोषधातुमलानां तु परिमाणं न विद्यते।।

These two are always very much desipicable: the stout or the lean. Best is to be medium but the lean is better than the stout. An aggravated *doṣa* will destroy the *dhātus* by its own splendour just as the fire, rendered powereful by a greater amount of fuel in the oven would burn out the water in the vessel (kept) on it. Every individual person is unique in his body which in addition is simultaneously dynamic

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and constantly unsteady as well. It therefore happens that there can be no constant or predetermined proportion in the amount of dosa, dhatu and mala (that a healthy person should have; these vary form person to person). Ss. su. 15.35-37.

h. *body constituents or dhatus*

98. दधतीति धातवो रसरक्तमांसादयः, कफपित्तपुरीषाण्यांपे प्राकृतानि स्वकर्मणा दधतीति धातवः।

(These entities) sustain (the body); hence, they are dhatus (from the root, dha, bear, sustain); (they are) nutritive fluids, blood, flesh and the like; even (dosas like) kapha and pitta (as well as the impurities like) stools, when non-denatured (lit. as produced naturally) sustain (the body); hence, they are (also) *dhātus Ḍa.* SS. śā. 4.5.

रसादयः सप्त धातवः, ते रस रक्त मांस मेदोऽस्थिमज्जा शुक्राणि।

Rasa and the like are the seven body constituents; they are the nutritive fluid or the (final) assimilable essence (derived from the food), blood, flesh, fat, bone, (bone) marrow and semen. Cs. ci. 15.16.

रसाद्रक्तं ततो मांसं मांसान्मेदस्ततोऽस्थिः।
अस्थ्नो मज्जा ततः शुक्रं शुक्राद्गर्भः प्रसादजः।।

(it is from the fluid (i.e. the soluble?) essence of the food (consumed), that there originate the seven body constituents like the nutritive fluid, and so on). The order is: blood, from the nutritive fluid; then, flesh; from flesh, fat; from fat, bone; then, the marrow; and then, the semen; from semen, the foetus, as the beneficient. Cs. ci. 15.16.

एवं पूर्व धातोरुत्तर धातुः संभवति क्षीरदधिन्यायेन।

It is in this order, the latter constituent arises from the previous constituent, according to the principle of the formation of curds from milk. Cs. ci. 15.28-34.

धातुवृद्ध्यादिक्रमः - पूर्वो वृद्धो धातुः परं वर्धयति, क्षीणश्च परं क्षपयति।

The order of (metabolic) increase in the (quantum of the) body constituents - if the earlier constituent (in the above serial order) increases, the latter one (also gets) increased; if the former declines, this will lessen the latter. A samg. su. 19.16 (*metabolic transformtion of the body elements*)

दुष्टाश्च वातादयो दोषा रसैर्धातून् दूषयन्ति।

If the variations become morbid, they vitiate the constituents by (their) fluids. A samg. su. 19.16.

धात्वग्नयो नाम धातूष्माणः सप्त संख्याकाः रसोष्म रक्तोष्मेत्यादयः।

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By the fires of the body constituents is meant the several (factors of) heat as found in the body constituents; (they are) seven in number - such as, the heat in (i.e. at the level of) the nutritive fluids, the heat in blood and so on. Cakra. Cs. ci. 15.38.

देहधातारः सप्त धातवः सप्तभिर्यथास्वमग्निभिः ते च किट्टप्रसादरुपं द्विविधं पाकं यान्ति। यथा रसस्य किट्टं कफः प्रसादश्च रक्तमित्यादि।

The sustainers of the body viz. the seven body constituents bring about two kinds of transformations by their own respective heat, such as that which has the form of a waste-product or that which has the form of a beneficiary product. For instance, the waste product of (the metabolism of the) blood is *kapha*, the beneficary product. Is blood and so on. Cs. ci. 15.15-18.

परिणाममापद्यमानानामयनार्थेन देशान्तर प्रापणेन धातूनामभिवाहीनि स्रोतांसि भवन्ति।

The channels (of the body) act as the conductors of the body constituents in order to secure them at different regions, and serving as the medium of their transport as they are getting transformed into different end-results. Cs. vi. 5.3.

तानि च धातुवाहीनि स्रोतांसि सप्त, रसवाहि रक्त वाहीत्यादीनि।

And the channels transporting the body constituents (as they are getting transported) are seven, nutrient-fluid conductors, blood conductors and so on. Cs. vi. 5.13.16 - (*tissue metabolism and circulation*)

धातुसाराश्च सप्त, त्वग् रक्त मांस मेदोऽस्थिमज्ज शुक्र भेदेन, सत्वेन सत्वसारश्चेत्यष्टौ।

(The somatotypes where one or the other of the seven body constituents is the most predominant are called the constituent - predominant-somatotypes). (Such) constituent predominant somatotypes are seven, (on the basis) of the differences (in the predominant constituent such as), dermic tissue, blood, flesh, fat, bone, marrow and semen; they are eight, (if we include) the mind (predominant) one, also. Cs. vi. 8.102. (*the possiblity of a diversity in the total quantum of the tissue development and its role in somatotype determination*)

धातु कर्माणि-रसादि धातूनां क्रमशः प्रीणनं जीवनं लेपः स्नेहो धारणं पूरणं गर्भोत्पाद श्चेति कर्माणि।

(*The functional role of the different constituents* :) The functional role of the (different) body constituents (in the metabolism of the body) such as nutritive fluids and so on are, respectively, pleasing (for the nutritive fluid), enlivening (for blood), plastering (for flesh), oleating (for fat), bearing (for bone) filling up (for marrow) and reproduction (for semen). Ahr. su. 11.4.

धातुमलाः - रसस्य कफः रक्तस्य पित्तम् मांसस्य स्वेपु श्रोत्रमुखादिपु स्रोतःसु जायमानो मलः मेदसः स्वेदः अस्थ्यां नख रोमाणि।

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The impure products of the constituents: (they are), kapha, for nutritive fluid; pitta, for blood; the impurities that get excreted by the exit points of their own respective channels, for flesh; sweat, for fat; nails and hairs, for the bone. Ahr. - (*tissue metabolism*)

सर्व धातूनां समप्रमाणत्वम् आरोग्यम् तल्लक्षणम् - रुगपगमनं स्वरवर्णयोगः शरीरोपचयो बलवृद्धिः अभ्यवहार्याऽभिलाषो रुचि राहारकालेऽभ्यवहृतस्य चाहारस्य काले सम्यग्जरणं यथाकालं निद्रा लाभो वैकारिकाणां च स्वप्नानामदर्शनं सुखेन च प्रतिबोधनं वातमूत्र पुरीष रेतसां मुक्तिः ।
सर्वाकारैः मनोबुद्धि इन्द्रियाणामव्यापत्ति श्चेति।

An equableness among all the constituents is health. Its characteristics are: freedom (lit. a going away) from diseases and pain, a combination of (proper) complexion and quality of the voice, (good) development (lit. metabolic increase) of the body, increase in strength, desire to eat food, appreciation of taste at the time of taking food, proper digestion in time of the food taken in, getting sleep at the appropriate time, not getting any distortive dreams, waking up (from sleep) comfortably, release of flatus, urine, stools and semen (in their routine ways) and no sort of hindrances whatsoever as regards the faculties of the mind, the intellect, or the senses, Cs. vi. 8.89 - (*a constitutional definition of health*).

g. *some details of the dynamics of the body functioning - physiology-*

(Blood is a transitory but a vital constituent, *dhātu,* of the body, transitory in the sense that it s always replenished and is ever on the move. Its flow never ceases as long as life exists and why should it flow like this incessantly is an inexplicable mystery (*adṛṣṭa hetuna*). Its initial is in the food that we take, for, it is nothing but the essence of the food that is transmuted by the *rasa kriya* or the chemical action of the body. it gets its colour in the region of the liver, commences its distribution from the lotus like heart, courses all over the body through the major and the minor ramifications of the vessels - many of the latter being so small as to be seen only by the sight of our imagination. In all these ways it nourishes the whole of man. Its end product is the seven *dhatus* (and thereby the *puruṣa* or the human person himself), of which in fact it is itself also a member. The disturbances and the deficiencies in the coursing of this blood or the supply of the nourishment that is ultimately due to this blood, are therefore reflected on the variations of these *dhātus* in the regions concerned. Consequenty one should study these latter variations themselves incisively as they represent virtually *the* clinical manifestations of the vagaries of the nourishement. These variations would (in fact) constitute the easiest seen and therfore the best utilisable criteria for diagnosis (of the disease, viz., deviation from the norm). For, the coursing of the blood itself is inferrable through them alone. Clinically, it is much more easy to observe the variations in the *dhātus* and their external morphological manifestations rather than the variations in either the coursing of the blood or its supply. There is an interesting sidelight on the clinical value of the changes in pigmentation of blood).

(i) *relation between rasa and blood*

99. तत्र पांचभौतिकस्य चतुर्विधस्य षड्रसस्य द्विविधवीर्यस्याष्टविधवीर्यस्य वाऽनेकगुणस्योपयुक्तस्याहारस्य सम्यक्परिणतस्य यस्तेजोभूतः सारः परमसूक्ष्मः स 'रसः' इत्युच्यते, तस्य हृदयं स्थानं, स हृदयाच्चतुर्विंशति

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धमनीरनुप्रविश्योर्ध्वगादश दशाधोगामिन्यश्चतस्रश्च तिर्यगाः कृत्स्नं शरीरमहरहस्तर्पयति वर्धयति धारयति यापयति चादृष्टहेतुकेन कर्मणा। तस्य शरीरमनुसरतोऽनुमानाद्गतिरुपलक्षयितव्या क्षय वृद्धिवैकृतैः। तस्मिन् सर्वशरीरावयवदोष धातुमलाशयानुसारिणि रसे जिज्ञासा-किमयं सौम्यस्तैजस ? इति। अत्रोच्यते - स खलु द्रवानुसारी स्नेहनजीवनतर्पण धारणादिभिः विशेषैः सौम्य इत्यवगम्यते।।

The food (that a person) takes is of five elemental principles (*pṛthvi, ap.* etc.), four kinds (drunk, licked, masticated and gulped), six *rasas* (sweet, sour, salt, pungent, bitter and astringent), two (cold and hot) or eight (cold, hot, unctuous, dry, clear, slimy, soft and acute) potencies and of inumerable qualitities (heavy, light, etc.). The very subtle essence of (all) this (varied types of) food after proper transmutation and when it represents the (real) efficacy and the vital power (secured therefrom) is called 'rasa' - (*the nutrients* or the assimilable essence). Its (distributive ?) seat is the heart. From the heart, it enters thrity-four arteries, ten going upwards, ten downwards, two lateral, (and in this way) due to some unknown reason *(adṛṣṭa hetunā),* continuously and incessantly, day in and day out, this (assimilable essence of the food) floods, nourishes, sustains and alleviates the whole of the body. The (full) course of its passage (in the body) is to be inferred (only and not seen directly) by assessing the waxing and waning of the body as well as (whatever are) the abnormalities (we can discern therin). In other words, the two viz., (i) the supply or the otherwise of this *rasa* on the one hand and (ii) the emaciation, good development or the abnormalities seen anywhere in the body on the other, are intimately related. However, the latter alone are physically and easily observable and as such should be utilised to infer the details of the (former, viz., the proper) supply or the otherwise of the *rasa* therein.

Regarding this *rasa* which (in this way) follows (closely) the whole of the body, all of its limbs (and also) the *doṣas,* the *dhatus* and the receptacles of the *malas* thereof, there is an arguable point. Is this *rasa,* mild or powerful, *saumya* or *taijasa,* gentle or violent? Here, we opine that this *rasa* flows along with a liquid (viz., the blood) and since it (also simultaneously) performs such speciaities of actions like unctuation, enlivening, refreshing, sustenance and the like, (we have to) infer that it is gentle or saumya (and not violent or *ugra*).

स खल्वाप्यो रसो यकृत्प्लीहानौ प्राप्य रागमुपैति।
रंजितास्तेजसा त्वापः शरीरस्थेन देहिनाम्।
अव्यापन्नाः प्रसन्नेन रक्तमित्यभिधीयते।।

This *rasa* which indeed is of the nature of water (and does not yet possess the full nature of the *jīva śoṇita* which has the qualities of all the five elementals and is therefore the blood proper; *see below*) gets the colour (of redness) when it reaches liver and spleen. Such a liquid when it gets pigmented by the effulgence situated in the body and when it is not disordered (but is) gracious, i.e., propitious, is called *raka* or blood.

रसादेव स्त्रिया रक्तं रजः संज्ञं प्रवर्तते।
तद्वर्षाद्द्वादशादूर्ध्वं याति पंचशतः क्षयम्।।
आर्तवं शोणितं त्वाग्नेयम्, अग्नीषोमीयत्वाद्गर्भस्य।

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It is by *rasa* alone, the blood in a woman flows out (during menstruation and thus) secures the designation of rajas (*rajas,* means activity as well as pigmentation). This (rajas or, the oestrous blood or the artava) increases from the age of sixteen onwards and declines after the age of fifty. The *artava* blood is *āgneya* (and not *saumya* as the blood we have just seen), because the womb it has to nurture is of the nature of both, violent (*agni*) and mild (*soma*).

पांचभौतिकं त्वपरे जीवरक्तमाहुराचार्याः।
विसता द्रवता रागः स्पन्दनं लघुता तथा।
भूम्यादीनां गुणा ह्येते दृश्यन्ते चात्र शोणिते।।

The experts speak of (yet) another blood (a third category) viz., the jiva rakta (the life blood) which is of all the five elemental principles (unlike the rakta of the first category which is of apya nature alone or the blood of the second category, viz., the oestrous blood). In this blood, we discern such qualities as: a peculiar flesh like smell, liquid nature, colour, (viz., the blood-redness), pulsatility and lightness. These are the qualities of (all) the five elemental principls of prthvi, etc., (for instance, the smell is of the prthvi; liquidnes, of the ap; colouredness, of the teja; pulsatility, of the vayu and lightness of the akasa). Ss.s su. 14. 3-9.

(ii) *transmutation of the rasa into the constituents of the body viz., the sapta dhātus*:

100. रसाद्रक्तं ततो मांसं मांसान्मेदः प्रजायते।
मेदसोऽस्थि ततो मज्जा मज्ज्ञः शुक्रं तु जायते।।

From the assimilable essence (*rasa*) of the food, blood arises; from thence the flesh (*māmsa*) and from flesh arises the adipose tissue (*meda*). From the adipose is born the bone, from then the marrow (*majja*) and from the marrow is born the semen.

तत्रैतेषां धातूनामन्नपानरसः प्रीणयिता।।
रसजं पुरुषं विद्याद्रसं रक्षेत् प्रयत्नतः।
अन्नात्पानाच्च मतिमानाचाराच्चाप्यतन्द्रितः।।

For all of these *dhatus* (viz., the constituents,. i.e., *rasa, rakta, mamsa, medas, asthi, majja* and *sukra*), it is the assimilable essence of the food and the drink, viz., the *rasa* alone that gratifies (i.e., propitiates). (In fact) it should be understood that the *puruṣa* or the human person (himslf) is born of this *rasa* (in the ultimate analysis) and therefore one should guard this *rasa* with the necessary effort (on one's part, for instance by taking care in what one) eats and drinks as well as by not indulging in fancy (personal) conduct and (geneal) behaviour and by never being wearied and inalert (in either of the two., viz., the food or the conduct-and-behaviour).

तत्र 'रस' गतौ धातुः, अहरहर्गच्छतीत्यतो रसः।

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The root meaning of the word *rasa* is 'moving' (rasa is the dhatu, to move). It is always on the move, day in and day out. That is why it is (called) a rasa.

स खलु त्रीणि त्रीणि कलासहस्राणि पंचदश च कला एकैकस्मिन् धातावतिष्ठतेः एवं मासेन रसः शुक्रं स्त्रीणां चार्तवं भवति।।

This (constantly moving entity) stays in everyone of the seven dhatus for the duration of three thousand and fifteen kala units of time. In this way, in a month, the rasa become semen (in man) or the artava in a woman. In our treatise as well as those written by others (*a clear statement for the existence of other technical literature then, though we do not know their names*) it has been said that it takes eighteen thousand and ninety *kala* units of time for *rasa* for this totality of the changes (i.e., *rasa* to become semen).

स शब्दार्चिर्जलसन्तानवदणुना विशेषेणानुधावत्येवं शरीरं केवलम्।।

This (*rasa*) runs after the whole of the body in a subtle form and in an uninterrupted series of units one after another (just) as we find in the succession of (i) the unending units of the waves of a sound (that move *all around* from a central point), (ii) the flames of a fire (that move only *upwards* from a base) or (iii) the drops of a (quantity of) water, that move only *downwards* from a top.

वाजीकरण्यस्त्वोषधयः स्वबलगुणोत्कर्षाद्विरेचनवदुपयुक्ताः शुक्रं शीघ्रं विरेचयन्ति।।

But the virilifying drugs, utilised as ejaculatories cause a quicker ejaculation of the semen because of the excessive power they have to bring about such an action (viz., they hasten up the rate of the transmutation of the rasa to semen as opposed to the graduality indicated above, which is normal).

यथाहि पुष्पमुकुलस्थो गन्धो न शक्यमिहास्तीति वक्तुं, नैव नास्तीतिः अथ चास्ति, सतां भावानामभिव्यक्तिरिति ज्ञात्वा, केवलं सौक्ष्म्यान्नाभिव्यज्यतेः स एव विवृतपत्रकेशरे पुष्पे कालान्तरेणाभिव्यक्तिं गच्छतिः एवं बालानामपि वयः परिणामाच्छुक्रप्रादुर्भावो भवति, रोमराज्यादयश्च विशेषा नारीणाम्।।

It is not possible to say in a flower-bud whether the fragrance is in this or that place nor whether does it not exist at all, or, exists. Similar is (about) the manifestaton of the feelings of a goodman (which gets expressed only when an occasion arises and not otherwise). This fragrane of the flower is not manifested (in the bud) solely because it is subtle but it does get (such) a manifestation in due course of time. Similarly, even in a child (it is) by the effect of time, (that) the appearance of the semen comes about and also the appearance of the streaks of the hairs and the like; (i.e. *the secondary sexual characters*); (similar is the case with) the specialities in a woman.

स एवान्नरसो वृद्धानां (जरा) परिपक्वशरीरत्वादप्रीणनो भवति। त एते शरीरधारणाद्धातव इत्युच्यते।।

However, this same *anna rasa* (which has developed in such ways) becomes distasteful to an old man, since his body has become over - ripe (*it does not need such biochemical transmutation as above either for sustenance or formation of the*

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dhatus which is almost nil - a point of importance in geriatrics. Do the vayasthapana or age arresting drugs SS speaks about later, promote this assimilatory power?)

(Now), it is these entities (viz., *rasa, rakta, mamsa, medas, asthi, majja* and *sukra*, all of which had their first stage of formation as *rasa,* as stated above) are called as *dhātus* or the constituents since it is they or that bear now or sustain the body (*dha, tu* that which bears, constitutes). Ss. Su. 10-20.

(iii) *blood - a few general remarks*

101. विधिना शोणितं जातं शुद्धं भवति देहिनाम्। देशकालौकसात्म्यानां विधिर्यः संप्रकाशित।।
तद्विशुद्धं हि रुधिरं बलवर्णसुखायुषा। युनक्ति प्राणिनं प्राणं शोणितं ह्यनुवर्तते।।

The blood generated in the proper way in persons who take food that is compatible to themselves in region, time and habit becomes pure. This proper way is what has been highlighted (earlier viz. in the chapter on Proper food and Conduct). It is this very pure blood alone that bestows the living (person) with strength, colour and life. The (very) life follows (solely after the blood). Cs. su. 24. 3,4.

(*relatedness of blood and liver; use of liver in haemorrhage;*)

He in whom there has been an execessive haemorrhage should drink blood with honey or eat raw meat of sheep along with the liver (*a clear indication of the awareness of the need for blood transfusion in a crude way*). Su. u. 45.28.

102. द्वितीया रक्तधरा मांसस्याभ्यन्तरतः, तस्यां शोणितं विशेषतश्च सिरासु यकृत्प्लीह्योश्च भवति।

(origin and characteristics) There is the second blood-bearing connective membrane within the interior of the flesh. It is from there, specially at the minute vessels of the liver and the spleen is the blood formed. Ss. sa. 4.10.

तत्राग्निरेव रसं रक्ततां नयति।

It is there that like fire the nutritive fluid is led to get redness. Cs. ci. 15.28.

रसः किल एकाहेनैव संपद्यते तदनन्तरं ये षड् धातवस्ते प्रत्येकं पंचभिरहोभिः संपद्यते।

The nutritive fluid gets formed within one day (after taking food). From then onwards what (we called as) the six body constituents - they get accomplished within five days, every one of them taking one day. Ss. su. 14.5. da.

तत्राम्बु शारीर महासारभूतं रसाख्यमविकृतम विकृतेन तेजसा रंजितिमिन्द्रगोपाकारं च शश शोणितगुंजाफलालक्तक पद्म सुवर्णवर्णं धौतं च विरज्यमानं मधुरमीषल्लवणं च स्निग्धम शीतोष्णं गुरु पित्तैक चय कोपोपशमनं सौम्याग्नेयं प्रकृत्या रक्तमाहुस्तदा दूष्यम्। दोषमिति केचित्।
उभयात्मकमिति अन्ये।

Therein, the non-denatured nutritive fluid is the great incarnate essence of the whole of the body. It is when this gets coloured by non-denatured effulgence, (into) what is of the form of the indra-gopa insect, colour of a rabbit's blood or the beads of Abrus precatorius, lac or red-lotus, clean, shining; sweet in taste, slightly

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saltish, unctuous, non-cold and hot, heavy, palliative to the provocation of the consolidation of pitta, gentle as well as fiery. It is then called the vitiatiable. Some consider it as the vitiator. Some consider it to be both. A samg. su. 36.6.

पांच भौतिक गुणाः - विस्रता द्रवता रागः स्पन्दनं लघुता च।

The qualities of the five primordial elements seen (in blood) : smelliness like flesh, fluidity, pigmentedness, throbbing and lightness. Ss. su. 14.9.

(*haematological diseases*)

103. मुखपाकोऽक्षिरागश्च पूतिघ्राणास्यगन्धिता।
गुल्मोपकुशवीसर्परक्तपित्तप्रमीलकाः। विद्रधी रक्तमेहश्च प्रदरो वातशोणितम्।।
वैवर्ण्यमग्निसादश्च पिपासा गुरुगात्रता। संतापश्चातिदौर्बल्यमरुचिः शिरसश्च रुक्।।
विदाहश्चान्नपानस्य तिक्ताम्लोद्गिरणं क्लमः। क्रोधप्रचुरता बुद्धेः संमोहो लवणास्यता।।
स्वेदः शरीरदौर्गन्ध्यं मदः कम्पः स्वरक्षयः। तन्द्रा निद्रातियोगश्च तमसश्चातिदर्शनम्।।
कण्ड्वरुः कोठपिडकाकुष्ठचर्मदलादयः। विकाराः सर्व एवैते विज्ञेयाः शोणिताश्रयाः।।

Inflammation of the mouth, redness of the eye, foul smell in the nose; splenic enlargement, gum-boil, erysepelas, plethora, shut - eye, abscess, blood in urine, maenorrhagia, *vātic* blood; change of colour (of the body), weakness of digestion; thirst, heavinss of the body; (a sensation of) scorching (all over), excessive weakness, loss of taste, headache, burning at the throat after food and drinks, pungent and acidic belching, exhaustion; plentiful anger, bewilderment of the intellect ; saltiness at the face; sweating, bad smell of the body; excitment, tremor, loss of sound (in the ear), sloth, too much of sleep, seeing darkness before the eyes while getting up or walking; itching, pimples, large round spots, pustules, dermatitis, skin warts and others. All of these aberrations should be known as due to their basis in blood. Cs. su. 24. 12-16.

(diagnosis:- by *upaśaya* or by the effect of the use of certain food or medicine).

Those diseases that do not become all right though curable, by the use of medicines that are cold, hot, viscous and dry and the like should be considered as being due to their origin being in blood i.e. haematological). Ss. su. 24. 17.

104. अरुणाभं भवेद्वतादिशदं फेनिलं तनु। पित्तात् पीतासितं रक्तं स्त्यायत्यौष्ण्याच्चिरेण च।।
ईषत्पाण्डु कफाद्दुष्टं पिच्छिलं तन्तुमद्घनम्। संसृष्टलिंगं संसर्गात्रिलिंगं सान्निपातकम्।

(*diagnosis by colour : blood analysis* ?) The blood vitiated by *vāta* is somewhat red (not fully), clear, frothy and thin. The blood vitiated by *pitta* is yellowish or darkish and because of (the presence of excess) heat (within such a *pitta* blood) clots rather slowly, when it comes out of the body. (The blood vitiated) by *kapha* is slightly whitish, slimy, fibrous and thick. If vitiated by two or three of the *doṣas,* it has the characteristics of these two or all the three vitiations. Cs. su. 24.20, 21.

तत्र, फेनिलमरुणं कृष्णं परुषं तनु शीघ्रगमस्कन्दि च वातेन दुष्टं; नीलं पीतं हरितं श्यावं विस्रमनिष्टं पिपीलिकामक्षिकाणामस्कन्दि च पित्तेन दुष्टं; गैरिकोदकप्रतीकाश स्निग्धं शीतलं बहलं पिच्छिलं चिरस्रावि मांसपेशीप्रभं च श्लेष्मदुष्टं।

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Therein (a blood that is) frothy, pink, dark, rough, thin, quick flowing and non-clotting is vitiated due to vata. (A blood that is) blue, yellow, green, tawny, flesh smelling, not liked by ants and flies and non-clotting is vitiated due to pitta. (A blood that is similar in colour to ochre water, viscous, cold, plentiful, slimy, flowing out for a long time, having the shine of a chunk of flesh is vitiated due to kapha). Su. su. 14.

तपनीयेन्द्रगोपाभं पद्मालक्तमसंनिभम्। गुंजाफलसवर्णं च विशुद्धं विद्धि शोणितम्।।

Efflugently shining, like the indragopa insect, similar in shine to the red lotus or lac, similar in colour to the Abrus seeds - such a blood is to be known as pure. Cs. su. 24. 22.

विशुद्धरक्तलिंगे नानावर्णता वातादिप्रकृतित्वान्मनुष्याणाम्।

Different colours arise in pure blood because of the different constitutions of *vāta* and the like in people. Cakrapani.

105. अतितीक्ष्णं मृदौ कोष्ठे लघुदोषस्य भेषजम्।
दोषान् हत्वा विनिर्मथ्य जीवं हरति शोणितम्।।

(*Strong medication and blood*) A very strong medicine in (a patient of) soft and weak constitution (lit. viscera) will take away pure blood (itself) churning it out (from the body) while removing the vitiation.

106. (testing the purity of blood)

तेनान्नं निश्चितं दद्याद्व्ययसाय शुनेऽपि वा। भुंक्ते तच्चेद्वदेज्जीवं न भुंक्ते पित्तमादिशेत्।
शुक्लं वा भावितं वस्त्रमावानं कोष्णवारिणा। प्रक्षालितं विवर्णं स्यात् पित्ते शुद्धं तु शोणिते।।

To ascertain the (purity or vitiatedness of the) blood it should be given as food to a crow or a dog. If it is eaten up by them, one should state it to be pure. If not eaten, it is to be concluded as vitiated with pitta. (Or) soak a piece of a white cloth in this blood and then wash the former in warm water and blow it upon; if the cloth gets decoloured, the blood is vitiated with *pitta*, if it becomes pure (white again), the blood is pure. Cs. si. 6.78.80.

107. तृष्णामूर्च्छामदार्तस्य कुर्यादामरणात् क्रियाम्। तस्य पित्तहरीं सर्वामतियोगे च या हिता।।
मृगगोमहिषाजानां सद्यस्कं जीवतामसृक्। पिबेज्जीवाभिसन्धानं जीवं गच्छति।। तदेव दर्भमृदितं रक्तं बस्तिं प्रदापयेत्।।

(*blood transfusion?*) In case this patient (of haemorrhage due to strong medicine, when his constitution is weak) suffers the attendant complications of thirst, fainting and intoxiation, treat him, till he dies (for, there is a change of recovery till the last moment). Administer to him all that will remove his *pitta* and an excessive dosage of what is wholesome. To restore him to life, he should (be made to) drink the just then-taken-fresh and living blood from a deer, a cow or a buffalow; his pure blood will (then) get immediately replenished. Or, give such a

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blood in the form of an enema through a blade of *darbha* grass softened in it (i.e. the blood itself) Cs. si. 6. 81.83.

अशुद्धौ बलिनोप्यस्त्रं न प्रस्थात्स्रावयेत् परम्।
अतिसुतौ हि मृत्युः स्याद्दारुणा वा चलामयाः।
यत्राभ्यंगरस क्षीर रक्त पानानि भेषजम्।

Even in a strong man vitiated blood should not be let out more than a *prastha* in quanlity. If there is excessive blood letting, there may ensue death or terrible *vātic* diseases.

In which case, the medicine is : taking oil bath or drinking, meat juice, milk and blood . A. hr. Su. 27.42.43.

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8. Principles of the Human Body (Anatomy)

a. *a philosophical basis*

(What we now mean by Anatomy or the structure of the body is discussed in Suśruta, the most detailed ancient Indian author here, not under any equivalent term like *angavichheda* or *angaviniścaya* which he himself utilises elsewhere. Instead, it forms a part of a more geneal term *Śārīra*, i.e., "a discipline concerning (the human) body". This does not mean that the dissection of the body was not given its due importance or the account of the structure of the body was built up by just fanciful guess work. Susruta was more intent in using the knowledge he gaind by dissection, rather as an aid to understand the building up of a living man than as a piece of information which is an end in itself. That is probably why he disposes of his anatomical information in the form of a few severely classified enumerations, such as the structures that are in threes, eights and so on. The fact that, because of this more prevailing interest, his anatomical knowledge is dealt with, neither indifferently not incompletely, is clear from the vividness and thoroughness of the details he furnishes within such a format as shown later and specially in the dimensions of the *marmas*.

The discussion of anatomy or, rather, the components and the making up of the living human body starts on a philosophical basis. It commences with the origin of living beings as such and the disposition of the three primoridal qualities of *guṇas* (i.e., *sattva, rajas* and *tamas*) in the whole of the cosmos. He argues that in the whole of the Universe, there are three basic qualities: *sattva, rajas* and *tamas* and there is nothing - organic or inorganic - where these three qualities do not pervade - a statement that would obviously jar a modern scientist. The latter may very well concede that these three attributes are probably all right if one intends to convey the attributes of mind in man, to which they are also usually confined even in general Sanskrit literature. But to extend them as applicable in anyway to other organisms, let alone the inorganic nature also, would be too much for him to concur in. We will find some justification if we examine the concepts themselves more minutely than usual. To put it briefly but exactly, we should note the following. *Sattva* refers to *the reality* of a situation (*sat* - that which exists). *Rajas* refers to an activated or rather a coloured situation of the entity (*raj* - to colour). *Tamas* alludes to a dullness of the same (*tamas* - darkness). *Satva* is positive but passive, *rajas* is probably positive but overactive and *tamas* is downright negative and inactive. Stated thus, the basic ideas and their professed universality would not be so jarring. In any situation, organic or inorganic, one will easily meet with these three states, These three concepts have held such a sway on Indian thought that we find a repercussion of them almost everywhere in science, arts, religion as well as poetry).

1. (There are three types of human personalities: *sattvika, rajasika* and *tamasika*. Their characteristics are as follows)

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सात्विकास्तु - आनृशंस्यं संविभागरुचिता तितिक्षा सत्यं धर्म आस्तिक्यं ज्ञानं बुद्धिर्मेधा धृतिरनभिपंगश्च।

The *sattivkas,* (possess the characteristics of having) compassion, a taste and a liking to share (what they have) with others, forbearance, truth, *dharma,* piety and belief in God, knowledge, intellect, mental vigour, memory, resoluteness and unattachedness.

राजसास्तु-दुःखबहुलताऽटनशीलताऽधृतिरहंकार आनृतिकत्वमकारुण्यं दम्भोमानो हर्षः कामः क्रोधश्च।

The *rājasikas* (possess the characteristics of having) a variety of griefs (to trouble them), a wandering nature, unsteadiness, egotism and conceit, agitatedness and untruthfulness (or even downright falsehood *ānṛtikatvam*), mercilessness, hypocrisy, self conceit and arrogance (*māna*), excitement, lustfulness and wrath.

तामसास्तु-विषादित्वं नास्तिक्यमधर्म शीलता बुद्रेर्निरोधोऽज्ञानं दुर्मेधस्त्वं अकर्म शीलता निद्रालुत्वं चेति।

The *tāmasikas* (possess the characteristics of having) despondency, atheism, habitual indulgence in *adharma,* intelligence locked up (i.e, highly self opinionative), ignorance, dull wittedness and stupidity, a predilection for not to do any work and also sleepiness. Ss. sa. 1.18.

2. (The characteristics of the five primordial elements are now given)

आन्तरिक्षः - शब्दः शब्देन्द्रियं सर्वच्छिद्रसमूहो विविक्तता च ; वायव्यास्तु-स्पर्शः स्पर्शेन्द्रियं सर्वचेष्टासमूहः सर्वशरीरस्पंदनं लघुता च ; तैजसास्तु- रुपं रुपेन्द्रियं वर्णः सन्तापो भ्राजिष्णुता पक्तिरमर्षस्तैक्ष्ण्यं शौर्यं च ; आप्यास्तु- रसो रसनेन्द्रियं सर्व द्रवसमूहो गुरुता शैत्यं स्नेहो रेतश्चः पार्थिवास्तु-गन्धो गन्धेन्द्रियत्वं सर्वमूर्त समूहो गुरुता चेति।

(The features of the) sky or *ākāśa* (which by etymology means, what is stretched - a space) or the Space (etymologically from Greek *spaein* to draw) are: sound, (being the primary cause of) the organ of the sound, the totality of all sorts of the apertures and the discreteness of the separatedness (*viviktatā*). The features of the Air (*vāyu*) are: touch, the organ of touch, the entirety of the activities, the entirety of the pulsation and throbbings of the body and lightness. (The features of the) Energy (*taijasa*) are : the organ for the form, the colour and the glow; radiance, digestion; impatience and passion (*amarṣa*); sharpness and heroism or valour. The features for the water (*āp*) are: taste, the organ of taste, the entirety of all the liquids, heaviness, coldnes,, cohesion and seminality. (The features) for the Earth (*pṛthvī*) (are); smell, the organ of smell; the entirety of the corporeal and heaviness. ss. sa. 1.19.

(These statements can perhaps be interpreted in modern terms as follows:

How would one recognise Space in practical terms? This is what is responsible for sound and is the primary cause for the evolution of the sense of hearing. Wherever one comes across an aperture - big or small, that would be space. Similarly one considers an object as being separate and discrete from the other, only if there is a space between the two. How to recognise Air? This is responsible for touch and the evolution of the sense of touch. It embraces the totality of all the behavioural activity (*ceṣṭā samūha*), all the throbbings (of life) that occur anywhere in the body and also lightness in general. How to recognise Energy? This is responsible for form and the evolution of the sense of form (viz., eye and sight).

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It causes colour, a warming of the body and a radiance or a glow, on the physical level. It is the cause of digestion on the physiological plane. It is resonsible for impatience, passionateness, acerbity, heroism and valour on the psychological plane. How to recognise Water? This is responsible for taste and the evolution of the sensor of taste viz., tongue. It is the totality of all that is liquid. It has the property of heaviness and coldness. It is this that causes viscosity and stickiness anywhere, physiologically. Semen has the nature of this water. How to recognise Earth? It is responsible for smell and the evolution of the sense of smell, i.e., nose.)

3. (Equating these five primordial Elements to the three all pervading qualites of *sattva*, etc., follows now).

तत्रः सत्वबहुलमाकाशं, रजोबहुलो वायुः, सत्वरजोबहुलोऽग्निः, सत्वतमोबहुला आपः, तमो बहुला पृथिवीति।

Therein, space is mostly *sattva* , Air is mostly *rajas* . Fire is mostly *sattva* and *raja* . Water is mostly *sattva* and *tamas* . Earth is mostly *tamas*.

(Though such is the general analysis, we should note the following which actually prevails). There are two statements (pertinent) here:

अन्योऽन्यानु प्रविष्टानि सर्वाण्येतानि निर्दिशेत्।
स्वे स्वे द्रव्ये तु सर्वेषां व्यक्तं लक्षणमिष्यते।।

It is to be noted that all of these (Viz., the five Primordials) are interpenetrating one another. But in their own respective materialisations, they have their specific characteristics very much manifest.

अष्टौ प्रकृतयः प्रोक्ता विकाराः षोडशैव तु।
क्षेत्रज्ञश्च समासेन स्वतन्त्रपरतन्त्रयोः।।

(We have thus told about) the eight *prakrtis* and the sixteen modifications thereof and also the knower of the corporeal frame. This is so in our treatise (i.e., their account can be given in this manner) as well as in the treatises of the others (i.e., the account we have given here is the same as you would get in others' works). Ss. sa. 1.20-22.

b. *the types of the human body: somatotypes*

(The innate types of the Human Body (or *prakṛtis*) are dealt with here. This comes in the Chapter *'Garbha vyākarana'* viz., analytical discussion about the foetus and its development into the adult. This is given here as it continues the line of thinking (of Constitutional Medicine) of the previous chapter. It will be illuminative to study this account in the light of the modern idea of Somatotypes and the theory of Constitutional Thereapy, i.e., that the course of therapy given to an individual will be most fruitful if the factors controlling his General Constitution congenitally are also taken into consideration as this Constitution is seen to vary in several clearly recognisable types. For instance, modern psychosomatic medicine makes a differentiation into such human types as viscerotonic and cerebrotonic.).

4. सप्त प्रकृतयो भवन्ति-दोषैः पृथक्, द्विशः, समस्तैश्च।

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The types of the Human beings are seven (depending upon the three controlling factors:) singly, (as *vata, pitta* or *kapha* – these are three), in twos (as *vāta-pitta, vāta-kapha* or *pitta-kapha* – these are three) or all the three together (this is one).

शुक्र शोणित संयोगे यो भवेत् दोष उत्कटः ।
प्रकृतिर्जायते तेन तस्या मे लक्षणं श्रृणु ।।

The types (of the adult person) get differentiated on the basis of that *dosa* which is most excessive at the time of the union of the *śukra* and *śoṇita* (the sperm and the egg). Listen to their charactristics from me (*as they are manifest in the fully grown adult because of these innate reasons*). S.S. sa. 4.62,63.

5. तत्र वातप्रकृतिः प्रजागरुकः शीतद्वेषी दुर्भगः स्तेनो मत्सर्यनार्यो गन्धर्व चित्तः स्फुटितकर चरणोऽल्परुक्षश्मश्रुनख केशः क्राथी दन्त खादी भवति ।

Vāta type: (He is) wakeful and sleepsless. He dislikes cold (things). He is unlucky (and has a tendency to) steal. He is jealous, vulgar and inferior (*anārya*). His mind is habitually in an excitable state (*gandharva citta*). His body has well differentiated hands and feet. His moustaches, nails and hairs are very harsh and slight. He is angry and murderous in disposition and habitually chews the teeth and the nails.

अधृतिरदृढसौहृदः कृतघ्नः
कृशपरुषो धमनीततः प्रलापी ।
द्रुतगतिरटनोऽनवस्थितात्मा
वियति च गच्छति संभ्रमेण सुप्तः ।।

(Psychologically, he is) unsteady and has weak friendships and is ungrateful. His body is emaciated and feeble and therefore stiff. His veins stand out prominently. He is much talkative, walks fast and likes to wander or roam about. His disposition is unsettled. In dream he (sees himself) going in the air or walking about with a flourish.

अव्यवस्थितमति श्चलदृष्टिः
मन्दरत्न घन संचय मित्रः ।
किंचिदेव विलपत्यनि बद्धं
मारुत प्रकृति रेष मनुष्यः ।।

His resolutions are unmethodical and unconventional (*anavasthita*). His gaze is unsteady and moving about. His acquisition of precious things, money and friends is feeble. He talks little only but irrelevantly. Such a person is of the *vata prakṛti*.

वातिकाश्च अजगोमायु शशाखूष्ट्र शुनां तथा ।
गृध्रकाकखरादीनां अनूकैः कीर्तिता नराः ।।

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He has the nature* of a goat (?), a fox (cunningness), a rabbit (timidity), a mouse (sneakiness), a camel (rather foolishness), a dog (servility), a vulture (greediness), a crow (meanness) and a mule (dullardness) and the like. Ss. sa. 4. 64-67.

6. पित्त प्रकृतिस्तु स्वेदनो दुर्गन्धः पीतशिथिलांग स्ताम्र नख नयनतालुजिह्वौष्ठ पाणि पदतलो दुर्भगो वली पलित खालित्य जुष्टे। बहुभुक् उष्ण द्वेषी क्षिप्र कोप प्रसादो मध्यबलो मध्यायुश्च भवति।

Pitta prakrti : He sweats much. (his body is) malodrous, limbs yellowish and loose. His nails, eyes, palate, tongue, lips, hands and soles of the food are copperish (red). He is unlucky. He has folds (on the skin), greyness and baldness. He eats much . He dislikes hot (things). He gets angry as well as pleased quickly.

His bodily strength is of the middle type and his span of life is also medium (i.e., neither much nor too little).

मेधावी निपुणमतिः विगृह्य वक्ता
तेजस्वी समितिषु दुर्निवार वीर्यः।
सुप्तः सन् कनक पलाश कर्णिकारान्
संपश्येदपि च हुताश विद्युदुल्काः।।

He is clever and mentally vigorous, adroit, speaks very analytically and is splendorous. He is invincible in committees and meetings. While asleep, he dreams of gold, *palāsa, karnikara* (both bearing grandiose flowers) and also fire, ightning and falling stars.

न भयात् प्रणमेदनतेषु अमृदुः
प्रणतेष्वपि सान्त्वनदानरुचिः।
भवतीह सदा व्यथितास्यगतिः
स भवेदिह पित्त कृत प्रकृतिः।।

He cannot be subdued by threatenings. He is harsh to the insolent. He likes to pacify and give gifts to those who are submissive and humble. He always gets boils of inflammations and pain in the mouth. This is the *pitta prakṛti*.

भुजंगोलूक गन्धर्वयक्ष मार्जार वानरैः।
व्याघ्रर्क्षनकुलानूकैः पैत्तिकास्तु नराः स्मृताः।

A *paittika* person is having the nature of a serpent (stealing along; surruptitiousness), an owl (secretiveness), a *gandharva* (libidinousness or lust), an

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* The allusion to the variety of animals is obviously to indicate the prevailing bent of mind. The term used in SS is */ anūka/* which MW translates as: peculiarity of disposition, character. We have therefore indicated what might be the particular bent of mind within brackets for everyone of the animals mentioned, wherever possible. If this is not possible for any particular animal, the situation is indicated by a question mark within brackets. It is *likely* that the readers also might agree with our presumptions to the psychological dispositions of the animals. But they are free to suggest anything better.

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yakṣa (malignant mood), a cat (?), a monkey (meddlesomeness), a tiger (fierceness), a bear (crudeness and persistence) and a mangoose (?). Ss. sa. 4.68.71.

श्लेष्म प्रकृतिस्तु दूर्वेन्दीवर निर्सिन्त्रशार्दारिष्टक शरकाण्डानामन्यतमवर्णः सुभगः प्रियदर्शनो मधुर प्रियः कृतज्ञो धृतिमान् सहिष्णुरलोलुपो बलवान् चिरग्राही दृढ वैरश्च भवति।

Śleṣma prakṛti : He has the colour of any of these: *durva, indīvara, nistrimsa* (wet i.e., non-dry, fresh neem) or *śara kāṇḍa* (stem of a sugar-cane variety). He is lucky, lovely to see and likes sweet (things). He is grateful, steady - witted, forbearing, non-covetous and non-avaricious, strong and very retentive. His enmity is steady, unrementing and unwavering.

शुक्लाक्षः स्थिरकुटिलालि नीलकेशो
लाक्ष्मीवान् जलदमृदंग सिंह घोषः।
सुप्तः सन् सकमल हंस चक्रवाकान्
संपश्येदपि च जलाशयान् मनोज्ञान्।।
रक्तान्त नेत्रः सुविभक्त गात्रः। स्निग्धच्छविः सत्व गुणोपपन्नः।

His eyes are white, hairs firm, curly and bluish like the bee. He is rich. His voice is deep and solemn like the (rumbling) cloud, the *mṛdanga* (a solemn percussion drum) or the lion. While asleep, he dreams of the *cakravāka* birds along with the lotus, the swans as well as the charming lakes and such other water reservoirs. His eyes are tinged reddish at the corners. His body is well differentiated. His lusture is steady and dense and he is endowed with the qualities of *sattva*.

क्लेशक्षमो मानयिता गुरुणां। ज्ञेयो बलासप्रकृतिर्मनुष्यः।।
दृढ शास्त्रमतिः स्थिरमित्र धनः
परिगण्य चिरात् प्रददाति बहु।
परिनिश्चित वाक्यपदः सततं
गुरुमानकरश्च भवेत् स सदा।।

He can bear hardships. He is reverential to the preceptors. He is inclined to get the diseases of consumption or pthisis. His convictions in the Scriptural Texts (*śāstras*) are firm. His friends and money are steady and unshaking. He gives a lot (but) after a long consideration. His speech as well as steps are well determined and definite. He always gives respect to the teachers.

ब्रह्म रुद्रेन्द्रवरुणैः सिंहाश्व गजो वृषैः।
तार्क्ष्य हंस समानूकाः श्लेष्मप्रकृतयो नराः।

He has the nature of a *brahma* (a priest?), a *rudra* (praise - worthiness, see MW), a *varuṇa* (all seeing nature), a lion (nobility), a horse (swiftness), an elephant (grandeur), a cow (gentility), a bull (powerfullness), a falcon or *garuda* (might) and a swan (majesty). Ss. sa. 4. 72-76.

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c. *the clinical relevance of the somatotypes*

8. द्व्योर्वा तिसृणां वाऽपि प्रकृतीनां तु लक्षणैः।
ज्ञात्वा संसर्गजा वैद्यः प्रकृतीरभिनिर्दिशेत्।।

The physician should determine the confluent nature of the patient on the basis of the characteristics manifested (in any particular case and ascertain) if more than two or even all the three types (mentioned above in detail) occur together . Ss. sa. 4.77.

प्रकोपा वा अन्यथा भावोबलक्षयो वा नोपजायते।
प्रकृतीनां स्वभावेन जायते तु गतायुषः।।
विषजातो यथा कीटो न विषेण विपद्यते।
तद्वत् प्रकृतयो मर्त्यं शक्नुवन्ति न बाधितुम्।।

Aggravation, or any other state of being , or the decline (of anything) will not occur (in any case) barring or transgressing the *prakṛti* (or this innate nature) concerned. (Or in other words) such aggravations, etc., arise (only within the frame-work of these inborn) types of the *prakrtis* (and not transgressing them). Moreover, such a change from the innate state of being occurs, when the span of life is on the decline. *(In fact, one can say in a way that this itself is one important cause of a disease)*. Just as the insect born inside a poison is not itself harmed by the poison, so also the *prakṛti* (even if injurious in isolation) will not be able to cause any harm to the person (who is born with that *prakṛti*). SS. sa. 4.78-79.

9. प्रकृतिमिह नराणां भौतिकीं केचिदाहुः
पवन दहन तोयैः कीर्तितास्तासु तिस्रः।
स्थिरविपुल शरीरः पार्थिवश्च क्षमावान्
शुचिरथचिरजीवी नाभसः खैर्महद्भिः।।

Some speak of prakrtis that are physical (*i.e., as due to the five primordial Elements or the panca bhūtas as against the somatotypes discussed above which are due to the congential variations in the dosas*). These (physical somatotypes as against the dosic ones) are of three kinds: Wind (*vāyu*), Fire (*teja*) and Water (*āpya*) types. Here, the *pṛthvi* type is steady, his body is huge, his habitual disposition is to pardon (the mistakes of the others). The *ākāśa* type is clean, long lived and his body has many ruptures on it. Ss. sa. 4.80.

10. (There is yet another classifiation of the human body. They are 31 types. Their names and characteristics are as follows:)

1. Brahma (of the Supreme); Cleanliness: piety and belief in God; practice and study of the vedas; worshipping of the preceptors; taking pleasure in offering hospitality and (actual) performance of *yagnas* (ritualisic sacrifices).

शौचमास्तिक्यमभ्यासो वेदेषु गुरुपूजनम्।
प्रियातिथित्वमिज्या च ब्रह्मकायस्य लक्षणम्।।

2. Mahendra (of the Lord of the gods): greatness; heroism, commanding nature: and inclinication always to consider what the Scriptural Texts (sastras) say and giving sustenance to the servants (and the dependents).

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माहात्म्यं शौर्यमाज्ञा च सततं शास्त्रबुद्धिता।
भृत्यानां भरणं चापि माहेन्द्रं कायलक्षणम्।

3. Varuna (of the god of the waters): habitual consumption of cold (things): tolerance; brown or tawny colour; greenish hairs and pleasant talk.

शीत सेवा सहिषणुत्वं पैग्ड्.गल्यं हरिकेशता।
प्रियवादित्वं ऐतत् वारुणं कायलक्षणम्।।

4. Kaubera (of the god of Wealth): staying in the middle (i.e., not going to the extremes); tolerance; (indulging and succeeding in) procurement and collection of money; and producing a large number of children.

मध्यस्थता सहिष्णुत्वं अर्थस्यागम संचयौ।
महाप्रसवशक्तित्वं कौबेरं काय लक्षणम्।।

5. Gandharva (of a celestial being who is gentle): a liking in fragrance and bedeckedness (with flowers, i.e., a dandyism); loving dance and instrumental music; and a pleasure seeking nature.

गन्धमाल्य प्रियत्वं च नृत्य वादित्रकामिता।
विहारशीलता चैव गान्धर्वं कायलक्षणम्।।

6. Yamya (of the god of death): carrying out completely any work that arises for the time; executing whatever he undertakes to do, with firmness and definiteness; fearlessness, cleanliness and freedom from passion, infatuation and hatred.

प्राप्तकारी दृढोत्थानो निर्भयः स्मृतिमान् शुचिः।
रागमोह मद द्वेषैः वर्जितो याम्य सत्ववान्।।

7. Rsi (of the saint or the sage): habitual indulgence in ritual practices of chanting and penance, celebacy, giving oblations in sacrifices and carrying out self-study (of the scripture) and endowed with knowledge and science.

जपव्रत ब्रह्मचर्य होमाध्ययन सेवितम्।
ज्ञानविज्ञान संपन्नं ऋषि सत्वं नरं विदुः।।

These seven are the somatotypes of the *sattvic* category. Listen from me now about the *rājasa* types. (They are:)

सप्तैते सात्विकाःकाया राजसान् तु निबोध में।

8. Āsura (Demoniac): He is wealthy, fierce, valourous, highly wrathful, discontented and envious. He eats alone. He is stomach minded (*audarika*).

ऐश्वर्यवन्तं रौद्रं च शूरं चण्डमसूयकम्
एकाशिनं च औदरिकं आसुरं सत्वमी दृशम्।

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9. Sarpa (Serpentine) : He is harsh, rough and rude (*tikṣṇa*). He habitually causes acute grief to others. He is timid, wrathful and deceitful. He is wanton and fickle in his pastime as well as general conduct.

तीक्ष्णं आयासिनं भीरुं चण्डं मायान्वितम् तथा।
विहाराचारचपलं सर्पसत्वं विदुर्नरम्।।

10. Sakuna (Bird like): He indulges excessively in fulfilling his lust. He is continuously eating, intolerant, and unsettled.

प्रवृद्ध काम सेवी चाप्यजस्राहार एव च।
अमर्षणोऽनवस्थायी शाकुनं कायलक्षणम्।

11. Rākṣasa (Impish): Completely one sided prejudice, fearsomeness; getting irritated at the merits and happiness of others; being away from *dharma* and indulgence in excessive self-praise characterise this type.

एकान्त ग्राहिता रौद्रं असूया धर्मबाह्यता।
भृशमात्रं तमश्चापि राक्षसं कायलक्षणम्।।

12. Paisaca (Fiendish): Eating what is left over from other's food; harshness, roughness and rudeness; adventurousness; cupidity and shamelessness characterise this type.

उच्चिष्टाहारता तैक्ष्ण्यं साहसप्रियता तथा।
स्त्रीलोलुपत्वं नैर्लज्यं पैशाचं कायलक्षणम्।।

13. Preta (ghostly): not sharing with others, laze, habitual grief, avarice and never giving anything to others characterise this type.

असंविभागं अलसं दुःखशीलं असूयकम्। लोलुपं च अदातारं प्रेतसत्वं विदुर्नरम्।।

These six are the *rājasa* types. Listen from me about the *tamasa* types.

षडेते राजसाः कायाः तामसान् तु निबोध मे।

14. *Pasu* (Beast like): Stupidity, dullness, habitually indulging in copulation in dream and denial of anything proposed.

दुर्मेधस्त्वं मन्दता च स्वप्ने मैथुन नित्यता।
निराकरिष्णुता चैव विज्ञेयाः पाशवा गुणाः।।

15. Matsya (Fish like) : Unsettledness, foolishness, timidity, asking for water (incessantly) and being quarrelsome with one another.

अनवस्थितता मौर्ख्यं भीरुत्वं सलिलार्थिता।
परस्परामिमर्दश्च मत्स्यसत्वस्य लक्षणम्।।

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16. Vanaspati (Plant or vegetable like): Liking to stay at a single place, engaged always in eating and having a detachedness from *sattva, dharma, kāma* or *artha* (i.e, any of the four tranditional objectives of life viz. search for the reality, religious merit, personal desire or economic prosperity). Ss. sa. 4. 81-87.

एकस्थान रतिः नित्यमाहारे केवले रतः। वानस्पत्यो नरः सत्व धर्मकामार्थ वर्जितः।।

11. (*a clinical note*:)

कायानां प्रकृतीन् ज्ञात्वा तदनुरुपां क्रियां चरेत्।

The medical treatment should be administered (by the physician) as befitting the somatotype concerned, after ascertaining the type to which the body of the patient belongs.

महाप्रकृतयस्तु एत। रजः सत्व तमः कृताः।
प्रोक्ता लक्षणतः सम्यक् भिषक् ताश्च विभावयेत्।।

These great divisions of the nature or the *prakṛtis* of a person into *sātvic, rājasik* and *tāmasik* have been made and also spoken about as per their (prevailing) characteristics. The physician should consider them carefully and properly. Ss. sa. 4. 88-99.

d. *the human body - the enumerative Anatomy*

12. अथातः शरीर संख्या व्याकरणं शारीरं व्याख्या स्यामः।
यथोवाच भगवान् धन्वन्तरिः।

We shall now comment upon (i.e, expound) the Chapter entitled Analytical splitting (*vyākarraṇa*) and enumeration of the (parts of the) human body (*śarīra samkhya*), as spoken by the reverential Dhanwantari. Ss. sa. 5. 1.2

शुक्र शोणितं गर्भाशयस्थं आत्म प्रकृति विकार संमूर्च्छितं "गर्भ" इत्युच्यते। तं चेतनाव स्थितं वायुर्विभजति, तेज एनं पचति, आपः क्लेदयन्ति, पृथिवी संहन्ति, आकाश विवर्धयतिः एवं विवर्धितः स यदा हस्तपाद जिह्वाघ्राणकर्ण नितम्बादिभिः अंगैः उपेतः तदा "शरीरं" इति संज्ञां लभते।
तत् च षडंगम् - शाखाः चतस्रो, मध्यं पंचमं, षष्ठं शिर इति।।

When the egg (formed) by the (fusion of) the *śukra* and the *soṇita* and situated in the womb congeals into a fixed form by the association of the *ātma,* the (eight) *prakṛtis* and the (sixteen) *vikaras,* it gets called the *'garbha'* or the Foetus. When it is animated (in this way), *vayu* divides and differentiates it, *teja* cooks, *apa* wets, *pṛthvi* condenses and *akasa* developes. Developed in this way, when it secures and gets endowed with the (several) organs like foot, tongue, nose, ears, butttocks and so on, it gets the title : (a human) body. This (completed human body) has six organs; the four limbs, the (single) middle (viz., the torso which is) the fifth (while) the sixth is the head. 1-3 Ss. sa. s.3

(In modern parlance, this would run as follows. The egg in the womb is formed by the fusion of the semen (called *sukra,* literally meaning the white; named thus after the typical colour of the semen) and the female counterpart (called *śoṇita,*

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the Red; named after the colour of the menstrual flow). After a quiescent stage (*garbhastham*) this undergoes an animation (*sammurchana*), i.e., an increase and sudden spurt of activity henceforth. An important change that happens very early here is : the coming in of the *atma* into the body of this egg and also endowing it with the eight *prakṛtis* and the sixteen *vikaras*. That is why it is spoken of as *cetanavasthita*, i.e., as having undergone a quickening up of an animation, not that it was ever inanimate. In fact, it is after the advent of these 25 factors (1 *atma*, 8 *prakrtis* and 16 *vikaras* as told in the previous section of perspectives) that all the further changes proceed. Only one modern analogue to this idea we can advance is: the statement of Eccless that Self arises very early in the ontogeny of the individual human being almost as a superstructure to Mind which in turn is a superstructure for the Brain.

The egg is called a Foetus only when it is endowed with these 25 factors and is thus animated; otherwise it is just an egg. During the further course of this animation, it developes by the following factors: the principle of Sensation (*vāyu*) divides it, that of *teja* (or Energy) brings about a maturation (literally, a *pāka* or a chemical activity), Water wets it, *Pṛthvi*, the factor for solidity condenses it and Space or the *ākāśa* affords the area for its development. Developed thus, it finally attains many specific organs of the adult like foot, tongue, etc. It is then called the human body.

The valid modern concepts hinted at here are : fertilisation existence of a quiescent egg state; its subsequent animation, development, diffrentiation and maturation during all of which the five primordial elements are involved and there is a similarity between maturation and any other chemical activity in the body; the former also involving chemical changes, (paka).

13. अतः परं प्रत्यंगानि वक्ष्यन्ते-मस्तकोदर पृष्ठनाभिललाट नासा चिबुक बस्ति ग्रीवा इत्येता एकैकाः, कर्ण नेत्र भ्रूशंख अंसगण्ड कक्षस्तन वंक्षण वृषण पार्श्व स्फिक् जानु कूर्पर बाहु ऊरु प्रभृतयो द्वे द्वे, विंशतिरंगुलयः, स्रोतांसि वक्ष्यमाणानि, एष प्रत्यंग विभाग उक्तः ।।

We shall henceforth tell about (i.e. specify) every organ. (They are:) head, belly, back, navel, forehead, nose, chin, bladder and neck - all of these are single in number. Ear, eye, eyebrow, temple, cheek, axilla, breast, side, buttock, knee, elbow, arm, thigh and the like - these are all two each. (Apart from these, there are) twenty fingers. About the channels or the tracts, we shall tell later - We have thus spoken about the further division of everyone (of the six) organs (mentioned above). Ss. sa. 5.4

(For a student of modern anatomy, the listing of the structures here will sound quaint as it does not seem to follow any natural method for instance of following any procedure sanctioned by the organ concerned, such as those of the head first and its organs, then the external structures, to be followed by the internals and so on as a modern anatomist would prefer. Instead, these are grouped mainly as per their number, such as those that are in ones, twoes, threes, etc. Though this method is definitely artificial, we cannot fail in appreciating the brevity and the real mnemonic aid one secures thereby).

14. तस्य पुनः संख्यानः त्वचः कला धातवो मला दोषा यकृत् प्लीहानौ फुफ्फुस उण्डुको हृदयमाशया अन्त्राणि वृक्कौ स्रोतांसि कण्डरा जालानि कूर्चा रज्जवः सेवन्यःसघातांः सीमन्ता अस्थीनि सन्धयः स्नायवः पेश्यो मर्माणि सिरा धमन्यो योगवहानि स्रोतांसि च।

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A further enumeration of the same (is as follows: i.e., what has been listed above i.e., in the *sutrau*, are the external organs; here, the internal structures are taken up), the skin, the *kalas*, (the partitive membranes), the *dhātus* (the Constituents), the *malas* (the impurities), the *doṣas*, the liver and the spleen, the lung, the stomach, the heart, the receptacles and the plexi, the intestines, the two kidneys, the channels (of transport), the *kaṇḍaras*, the *kurcas* (or the brushes), the cords (or the *rajju*), the sutures, the heaps (*samghata*), the lines of separation (*sīmanta*) the bones, the joints, the tendons and ligaments (*snayu*), the muscles, the *marmas*, the veins or the *sira*, the *dhamanies* and the channels (*srota*) that carry the '*yoga*' or the combines of many materials, e.g., the alimentary canal carrying a heterogeneous mix of materials Ss. sa. 1.5.5

(A question we have to constantly ask ourselves while reading these portions of the Text on anatomy is : how many structures of the gross anatomy can we *conclusively* say that Susruta had really recognised and what do everyone of these individual structures that he mentions corresponds to, as we now understand in human anatomy. In deciding these correspondences we are to be naturally quite cautious. At the outset itself we can presume that he did not recognise any very minute structures (for e.g., the bones of the middle ear) and much less the microscopic structures. Microscopic anatomy is totally unknown. Still, it is important even here to note that Susrtua *did* believe the possibility of the existence of structures *beyond* our powers of naked eye recognition. He clearly mentions so in connection with his account of the branching of the vasculature where he specifically states that some of them may be much finer than what is seen and are therefore inferrable solely by imagination. Similarly the existence of a *śarīri* (corresponding to a Self or a Soul ?) of the body can be only inferred and not demonstrated. Evidently in his philosophy also, much as it exists in modern science now, what is logically needed has every chance of being actually present unless one can conclusively prove otherwise.

We shall now endeavour to equate Sursruta's structures to modern anatomy. To do so we should heavily lean on what is found in the Text itself. Quite often, we do get some tangible information to do so as for e.g., in the *kalas*, the *dhātus*, etc., that are mentioned earlier (for e.g. Sa. 4, 4-5). More importantly, the number given for individual structures (e.g., see the statements: "*srotas* are seven, *kaṇḍaras* are sixteen" etc.) also offers us an important clue. We utilise all such informations in the account below.

The structures for whose correspondence, there is some doubt are : *kala, kaṇḍara, rajju, snāyu, sira* and *dhamani*. We discuss them in brief below).

15. त्वचः सप्त, कलाः सप्त आशयाः सप्त, धातवः सप्त, सप्त सिराशतानि, पंच पेशीशतानि, नव स्नायु शतानि, त्रीणि अस्थिशतानि, द्वे दशोत्तरे सन्धिशते, सप्तोत्तरं मर्मशतं, चतुर्विंशति धमन्यः, त्रयो दोषाः, नव स्रोतांसि, (षोडाश कण्डराः, षोडश जालानि, षट् कूर्चाः चतस्रो रज्जवः, सप्त सेवन्यः, चतुर्दश संघाताः, चतुर्दश सीमन्ताः, द्वाविंशतिः योगवहानि स्रोतांसि, द्विकान्त्राणि) च इति समासः ।।

The skins are seven*, the *kalas* are seven, the receptacles are seven, the

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* It is such specific mentioning of the numbers that enjoins us to note that Susruta is telling here what he has himself seen conclusively and is not speaking on guess work. There is no ambiguity or lack of thoroughness in his statements though we may find errors in them now.

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dhātus are seven, the *siras* are seven hundred, the muscles are five hundred, the tendons and ligaments are nine hundred, the bones are three hundred, the joints are two hundred and ten, the *marmas* are hundred and seven, the *dhamanis* are twenty-four, the vitiations or the *dosas* are three, the *malas* are three, the channels are seven, the *kandaras* are sixteen, the plexii are sixteen, the bunches are six, the cords are four, the sutures are seven, the *sanghatas* are fourteen, the separating lines are seven, *yoga vaha* channels are twenty-two and the intestines are two. This is enumeration in brief (*of the internal structures*).

विस्तारोऽत ऊर्ध्वं-त्वचोऽभिहिताः कला धातवो मला दोषा यकृत् प्लीहानौ फुफ्फुस उण्डुको हृदयं वृक्कौ च।

Now about the details. We have already mentioned them (as they concern with) the skin, the *kalā*, the *dhātus*, the impurities, the vitiations, the liver and the spleen, the lung, the stomach, the heart and the testicles. Ss. sa. 5,6,7

(The anatomical account given by Susruta in this chapter as well as elsewhere in his extensive Text is surprisingly detailed and fairly accurate. Two specific instances among the many are his classification of the skin into seven layers and the precise dimensions for the different *marmasthānas*).

The skin is divided into seven layers, everyone of which is named appropriately. These are recorded to vary in their relative dimensions as well as what we can call 'disease penetrability'. For example, the first and the most superficial layer is called *avabhasini* (i.e., what is responsible for the glow of the skin, viz., the pigment bearing portion). This is 1/18th of a paddy grain in its thickness. The pimples and moles extend upto this layer alone. The seventh and the last layer is called *mamsadhara* (the supporter or the bearer of the flesh i.e., lying next to the flesh inside). This is rather stout - of 2 paddy grains in thickness. Anal fistula, abscesses and piles involve this layer also, i.e., these penetrate so deep. All the remaining five layers are described in such ways. A caution is also added that the relative proportions stated here, holds good only in the fleshy regions of the body, not for e.g. in such areas as the forehead, tip to the small finger, etc.

16. सप्त त्वचो भवन्ति। तासां प्रथमाऽवभासिनी नाम, या सर्वान् वर्णान् अवभासयति पंचविधां च छायां प्रकाशयति, सा व्रीहेरष्टादश भागप्रमाणा, सिध्म पद्म कण्टकाधिष्टानाः द्वितीया लोहिता नाम, षोडशभागप्रमाणा, तिल कालकन्यच्छ न्यच्छ व्यंगाधिष्ठानाः तृतीया श्वेता नाम, द्वादश भाग प्रमाणा, चर्मदला जगल्लीमषकाधिष्ठानाः चतुर्थी ताम्रा नाम अष्ठ भाग प्रमाणा, विविध किलास कुष्ठाधिष्ठानाः

पंचमी वेदिनी नाम पंच भाग प्रमाणा, कुष्ठ विसर्पाधिष्ठानाः सप्तमी मांसधरा नाम व्रीहिद्व्य प्रमाणा, भगन्दर विद्रध्यर्शोऽधिष्ठाना।

यदेतत् प्रमाणं निर्दिष्टं तन्मांसलेषु अवकाशेषु, न ललाटे सूक्ष्मांगुल्यादिषु चः यतो वक्ष्यति उदरेषु।

व्रीहिमुखेन अंगुष्ठोदर प्रमाण मवगाढं विध्येत् (चि.अ. १४) इति।।

The seven layers of the skin are as follows, from the surface inwards. 1) *avabhāsinī* (causing shining), the seat of pigmentation and the human aura which is of five types; 1/18 of a paddy grain in thickness, the pathological site of the skin freckles such as *sidhma* (blotches and leprous spots), *padma kaṇṭaka* (lotus spines, i.e., pimples ?*), 2) *lohita* (the red-where blood vessels have their coursing ?*), 1/16 of grain thick and the site of moles such as *tila* (like sesame grain), *kālaka* (the black spots), *nyaccha* (spots) and *vyanga* (any superficial deformity of the skin ?*), 3) *swetā* (the white - adipose regions ?*), 1/12 grain thick and the site of *carmadala* (a form of leprosy), *aja gallika* (like the goat's

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cheek - an infant's disease, - mumps ?*) and *masaka* (a skin disease that causes bean like pustules and eruptions), 4) *tamra* (the coppery), 1/8 grain thick, site of the various types of *kilasa* (white leprous spots) and *kuṣṭa* (other types of leprosy), 5) *vedinī* (the sensitive - where the superficial nerve branches have their lodgement?*) 1/5 grain thick and the site of *kuṣṭa* (leprosy) and *visarpa* (erysipelas), 6) *rohiṇi* (growing or, healing quickly ?*), 1 grain thick and the site of *granthi* (glandular enlargements), *apacya* (abnormal, non-malignant growths ?*), *arbuda* (tumours), *ślipada* (elephantiasis) and *gala ganḍa* (goitre - enlargement of the glands of the cheek) and 7) *mamsa dhara* (supporting i.e. adhering next to the flesh below ?*), 2 grains thick (i.e., thickest of the seven layers) and the site of *bhagandara* (fistula in ano), *vidradhi* (abscess) and *arsa* (piles).

The relative proportions stated here hold good only in the fleshy regions of the body, not for e.g. in such areas as the forehead or the tip of the little finger, etc. Ss. sa. 4.4

(How can we explain the existence of this much detail - if the method of learning was totally of rote type and unrelated to practical observations, as often criticised nowadays? The point is : we are examining here the *early source* of Ayurveda. It is likely that in later decadent days of Ayurveda (as it also happened in the Galenical period in the West), learning was solely by rote method; examination of practical situation was not insisted upon. We *cannot* presume this to have been so in the times of an early author like Susruta. The simplest and the most natural expalantion is: these facts were written about, as they were actually seen so. In the case of anatomy, this seeing was carried out by two methods: actual surgical practices of various experts (Susruta has merely codified this information - hence the name of this work is a Samhita apart from adding what was his own, as well) and the dissection of the dead body. It was not just guessed at or imagined and merely speculated. One cannot expect the occurrence of this amount of accuracy otherewise.

The reason why a modern reader ususally tends to doubt the observational basis of these statements is: the extreme terseness of their writing. It is only the final point that is stated in these Texts and often in an aphoristic style with no elaboration of the preliminaries or the bases; there is a complete absence of the discursive style of modern Text books of science.

A natural explanation to the method of anatomical study here is possible. Decaying and not dissection was taken recourse to study anatomy because masceration rather than cutting, is a better method to understand the part in their entirety and the simplest method of masceration was decaying or putrefaction. Dissection practices on fruits etc., is a measure of expediency and due to the difficulty in procuring and managing the dead body).

17. आशयास्तु-वाताशयः, पित्ताशयः श्लेष्माशयो, रक्ताशयः, आमाशयः, पक्काशयो मूत्राशयः, स्त्रीणां गर्भाशयोऽष्टम इति ।+

The receptacles are : of *vāta, pitta, sleṣma*, blood, raw food (stomach), digested food (duodenum and intestine), urine (bladder) and in women, of foetus (i.e., the uterus), the eighth one (and not found in man).

+ Presumably everyone of the three *doṣas* was stated to be having a separate receptacle where it was stored predominantly.

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सार्धत्रिव्यामानि अन्त्राणि पुंसां, स्त्रीणामर्ध व्याम हीनानि।

The intestine in man is of three and a half *vyāma* (*one vyama is the measure of the two extended arms : 5 aratnis.* MW); in woman, (it is) minus this half, i.e., of three *vyama*.

श्रवण नयन वदन घ्राणगुदमेढ्राणि नव स्रोतांसि नराणां बहिर्मुखानि, एतान्येव स्त्रीणामपराणि च त्रीणि द्वे स्तनयोः अधस्तात् रक्तवहं च।

Ears (2), eyes (2), mouth (1), nose (2 i.e., the two nostrils), anus (1), penis (1) - these nine channels or tracts in man are facing outward. In woman all of these are there, plus (there are) three (more, i.e.,) two for the breasts and one below, for the oestrous blood. Ss. sa. 5.8-10.

18. षोडश कण्डराः - तासां चतस्रः पादयोः, तावत्यो हस्तग्रीवेषु; तत्र हस्तपादगतानां कण्डराणां नखा अग्रप्ररोहाः, ग्रीवा हृदय निबन्धिनीनाम् अधो भागगतानां मेढ्रं, श्रोणि पृष्ठ निबन्धिनीनाम् अधोभागगतानां बिम्बं, मूर्धोरुवक्षोंस पिण्डादीनां च।।

The *kaṇḍaras* or the cardinals are sixteen. Of these, there are four in the feet, four again in the hand, the neck and the back. Therein for the cardinals of the hand and the feet, nails are the culminating points. For those of the neck, the heart and what fastens them on (*nibandhanīnam*) and go downwards, the culminating point is the *meḍhra* or the penis. For those of the hips and the loin (*śroṇi*) and the back, what fastens them and go downward, the culminating point is the buttocks. Head is the culminating point for the cardinals of the thigh, the chest, the *amsa* (the fleshy part of the shoulder blade situated about the collar bone) and the like. Ss. sa. 5.11

(The term/ *kaṇḍara*/ is from the root/ *kaṇḍ*/ - to separate (the chaff from tthe grain MW.) We can probably conclude that this term therefore signifies what stands out separately and prominetly against a background. It is on such a proposition, we have presumed this to represent a cardinal tendon that stands out pronounced, probably even on the surface-appearance of the body. These are said to be sixteen as follows: 4 each in the hand, the feet, the neck and the back).

19. मांस सिरास्नाव्वस्थि जालानि प्रत्येकं चत्वारि; तानि मणिबन्ध गुल्फ संश्रितानि परस्पर निबद्धानि परस्पर गवाक्षितानि चेति, यैः गवाक्षितम् इदं शरीरम्।।

The networks or the plexi of flesh, veins, tendons and bones are four each. They are situated in the ankle and the wrist. Here, the individual members are dependent, connected, coherent and inter-latticing (*gavekṣitāni*) with one another. It is because of these networks, this body itself is (said to be) latticed. Ss. sa. 5.12.

(Plexus or network refers to places where many structures interramify in a close area. Susruta recognises 4 of them, 2 in the wrists and 2 in the ankles; the several anatomical structures that interweave here are :flesh, blood vessels, tendons and bones. The bunches or rather the brushes (*kurca*) listed next below refer to the

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fact that the many individual structures there, appear as if they are being bunched out from a common base as in a brush.)

20. षट् कूर्चाः, ते हस्तपाद ग्रीवा मेढ्रेषु, हस्तयोः द्वौ, पादयोः द्वौ, ग्रीवा मेढ्रयोः एकैकः ।।

The bunches or brushes are six. They are situated in the hand, the foot, the neck and the penis. In the hand, they are two, in the feet two, one in the neck and one in the penis. Ss. sa. 5.13

21. महत्यो मांस रज्जवः चतसः - पृष्ठवंशमुभयतः पेशी निबन्धनार्थं द्वे बाह्ये, आभ्यन्तरे च द्वे।।

The great muscular cords or the fascia are four. They are on either side of the backbone (and they work in such a manner as) to fasten the muscles; (of these) two are superifcial and two are deep seated. Ss. sa. 5.14.

(Fascia are fibrous, membrane covering, supporting and separating muscles. They also unite the skin with underlying tissue; they may be superifcial - a nearly subcutaneous covering permitting free movement of the skin, or, deep, enveloping and binding the muscles. Susruta's two *rajjus* seem to correspond to *fascia cervical superificial* (fascia of the neck just inside the skin) and *fascia cervical deep,* i.e., fascia of the neck covering the muscles, the vessels and the nerves. But, since the Text states that the *rajjus* are on either side of the backbone they may more properly be *fascia lumbodorsal* - a deep investing membrane covering deep muscles of the trunk and back).

22. सप्त सेवन्यः; सिरसि विभक्ताः पंच, जिह्वा शेफसोः एकैकाः ता परिहर्तव्या शस्त्रेण।।

The sutures are seven; five situated on the head, one each for the tongue and the penis. These should be avoided during operation. Ss.su. 5

(The five sutres of the head correspond to the five suture lines between the skull bones. The frenulum on the tongue is the latter's suture. The suture of the penis refers to such a structure connecting the penis with the scrotal sac or, more properly what lies between the two scrotal sacs).

23. चतुर्दशास्थ्नां संघाताः; तेषां त्रयो गुल्फ जानु वंक्षणेषु,एतेन इतर सक्थि बाहू च व्याख्यातौ, त्रिकशिरसोरेकैकः ।

The bone aggregates or heaps are fourteen. of these, three are in the ankle, knee and the groin, respectively. Same is the case with the thigh and the arm, they are one each in the shoulder blade (trika) and the loins as well as the head. Ss. sa. 5.16.

(The bone aggregates refer to regions where a number of separate bones occur in the close place as if they are a heap. Such heaps occur in the ankle, the knee and the groin of the 2 legs (6 heaps in total), similarly 6 for the 2 arms (wrist, elbow and the shoulder blade), one in the head and one in the pelvis).

24. चतुर्दशैव सीमन्ताः, ते च अस्थिसंघातवत् गणनीयाः, यतः तैर्युक्ता अस्थिसंघाताः, ये ह्युक्ताः संघातास्ते खलु अष्टादशैकेषाम्।

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The separating lines (*simanta*) are also fourteen. They are to be counted just as we did for the bone aggregates or joints. For, the bone-aggregates themselves get formed because of these separating lines. According to others (however) the bone aggregates are eighteen Ss. sa. 5. 17

(It is curious to note that the border or the separating lines are 18 in Vagbhata. Vāgbhata is decidedly recognised as a Text much later than Susruta. Does this mean therefore that Vaghbhata is quoting here a tradition earlier than Susruta or has he added on his own ? Is Susruta quoting this original source of this tradition which Vāgbhata has evidently followed when he mentions *paratantra*, the other treatises here ? Which are these other treatises ?)

25. त्रीणि सषष्टानि अस्थिशतानि वेदवादिनो भाषन्ते, शल्यतन्त्रेषु तु त्रीण्येव शतानि। तेषां सविंशमस्थिशतं शाखासु, सप्तदशोत्तरं शतं श्रोणिपार्श्व पृष्टोरः सु, ग्रीवा प्रत्यूर्ध्वं त्रिषष्टिः, एवम् अस्थ्नां त्रीणि शतानि पूर्यन्ते।

The (traditional) ayurvedists presume that the bones are three hundred and sixty. But in surgery they are taken to be only three hundred. Of these, one hundred and twenty are in the limbs, one hundred and seventeen in pelvis, sides, back and chest; beyond the neck, (they are) sixty-three. In this way the total bones make up (to be) three hundred. Ss. sa. 5. 18.

(Who are these traditional ayurvedists ? Does this refer to the sources for Caraka for, 360 is the number of the bones which Caraka gives ? The comparative bone count for the three authors are : 360 (Caraka), 300 (Susruta), 206 (modern anatomy). The detail distribution of the bones now follows).

26. एकैकस्यां तु पादाग्ङुल्यां त्रीणि त्रीणि तानि पंचदश, तलकूर्च संश्रितानि दश, पाष्ण्यां एकं, जघांयां द्वे, जानुनि एकम्, एकं ऊरौ इति, त्रिंशदेवम् एकस्मिन् सक्थ्न भवन्ति, एतेन इतर सक्थि बाहू च व्याख्यातौ;

श्रोण्यां पंच, तेषां गुद भग नितंम्बेषु चत्वारि, त्रिक संश्रितं एकम्, पार्श्वे षट् त्रिंशदेकस्मिन्, द्वितीयेऽपि एवं, पृष्ठे त्रिंशत्, अष्टावुरसि, द्वे अंसफलके;

ग्रीवायां नव, कण्ठ नाड्यां चत्वारि, द्वे हन्वोः, दन्ता द्वात्रिंशत्; नासायां त्रीणि, एकं तालुनि, गण्ड कर्ण शंखेषु एकैकं, षट् शिरसीति।

In each limb, in everyone of the fingers, they (the bones) are three, in total - fiteen; ten are situated in the sole (of the foot), the bunch (metatarsus) and the ankle; one, in the heel; two in the shank; one, in the knee; one, in the thigh - in this way, they are thirty in one leg. Similar is the case with the other leg and also the arms.

They are five in the pelvis. (Of these,) four are in the anus, the vulva and the buttocks; one is in the pelvic joint. On one side, they are thirty-six, the same is the case with the other side; on the back, thirty; the chest, eight, and (*there are*) two shoulder blades.

In the neck, they are nine; in the laryngeal tube (*kanthanadi*), they are four; two, for the lower jaws; teeth are thirty-two; three, in the nose; one, in the palate, one each in the cheek, the ear, and the temple; six in the head (i.e. in the skull) Ss. sa. 5.19

27. एतानि पंचविधानि भवन्ति; तद्यथा-

कपालरुचकतरुण वलय नलक संज्ञानि। तेषां जानु नितम्बांसगण्ड तालु शंख शिरः सु कपालानि, दशनास्तु रुचकानि, घ्राणकर्ण ग्रीवाक्षि कोषेषु तरुणानि, पार्श्वपृष्ठोरः सु वलयानि, शेषाणि नलकसंज्ञानि।

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These bones are of five kinds. They are : *kapāla* (dish like), *rucaka* (tasting - the teeth or the dentals), *taruna* (the tender - the cartilages), *valaya* (the ring or the curved bones) and *nalaka* (the reed, i.e. the long narrow bones). Of these, the dish bones are found in the knee, the buttocks, the shoulder, the palate, the temple and the skull. The teeth are the dentals. The tender or the cartilaginous bones are in the nose, the ear, the neck and the orbital cup. What is found in the sides, the back and the chest are the curved bones. The rest are the reed bones. Ss. sa. 5.20.

28. अभ्यन्तरगतैः सारैर्यथा तिष्ठन्ति भूरुहाः ।
अस्थिसारैस्तथा देहा ध्रियन्ते देहिनां ध्रुवम् ।
तस्मात् चिर विनष्टेसु त्वङ्.मांसेषु शरीरिणाम् ।
अस्थीनि न विनश्यन्ति साराण्येतानि देहिनाम् ।।
मांसान्यत्र निबद्धानि सिराभिः स्नायुभिस्तथा ।।
अस्थीन्यालंम्बनं कृत्वा न शीर्यन्ते पतन्ति वा ।।

There is a saying here. Just as the trees stay rigid and firm because of the hard core inside, the body is borne by (such a hard) core of the bones (that lies) inside it. That is why even if the skin and flesh are lost, the bones do not disappear; they are the core for the body. The muscles and the flesh are fastened on to the bones, and so also the veins and the ligaments and the tendons. Having their support on these bones, they do neither get apart nor fall down . Ss. sa. 5.21-23.

29. सन्धयस्तु द्विविधाः चेष्टावन्तः, स्थिराश्च ।
शाखासु हन्वोः कट्यां च चेष्टावन्तस्तु सन्धयः ।
शेषास्तु सन्धयः सर्वे विज्ञेया हि स्थिरा बुधैः ।

The joints are of two kinds; movable and firm. The joints of the limbs, the jaws and the waist are movable. All the rest of the joints are considered immovable by the learned. Ss. sa. 5. 24,25

30. संख्यातास्तु दशोत्तरे द्वे शते । तेषां शाखास्वष्टषष्ठिः, एकोनषष्ठिः कोष्ठे ग्रीवां प्रत्यूर्ध्वं त्र्यशीतिः ।
एकैकस्यां पादाग्रङ्गुल्यां त्रयस्त्रयः, द्वावंगुष्ठे, ते चर्तुदशः जानुगुल्फ वंक्षणेषु एकैकः, एवं सप्तदशैकस्मिन् सक्थ्नि भवन्तिः एतेनेतर सक्थि बाहू च व्याख्यातौ ।
त्रयः कटी कपालेषु, चतुर्विंशतिः पृष्ठवंशे, तावन्त एव पार्श्वयोः, उरस्यष्टौः तावन्त एव ग्रीवायां,
त्रयः कण्ठे, नाडीषु हृदयक्लोम निबद्धासु अष्टादश, दन्त परिमाणा दन्त मूलेषु एकः काकलके नासायं च, द्वौ वर्त्म मण्डलयोः नेत्राश्रयौ,
गण्ड कर्ण शंखेषु एकैकः, द्वौ हनुसन्धी, द्वौ उपरिष्टात् भ्रुवोः शंखयोश्च, पंच शिरः कपालेषु, एको मूर्ध्नि ।।

The joints are two hundred and ten; sixty in the limbs, fiftynine in the torso and eighty-three beyond the neck above.

In each of the leg, for every toe, the joints are three each, two in the small toe. Thus they are fourteen; in the knee, the ankle and the groin, one each - thus seventeen in each leg. The same is the case with the other leg and the arms.

(In the torso) these are three in the waist hollow (*kati kapala*); twenty-four in the verteberal column. In the sides also (they are) twenty only and (they are) eight in the chest.

Same (i.e. eight) is for the nape of the neck (*griva*). Three (are the joints) in the throat. They are eighteen in the tubulars (*nadiṣu*) that surround and are

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attached to the heart and the lungs. (They are) as many as there are teeth at the dental bases (viz., thirty-two); one in the *kākalaka* or the larynx (viz., the thyroid cartilage ?) and also in the nose. (There is another version of the Text which states that the joints are five in the nose and they are only two, for the two eyes); two joints are borne in the orbital ring associated with the eyes; one each in the cheek, the ear and temple; two are the joints of the jaw, two above the eyebrows, five in the skull and one in the forehead. SS. sa. 5.26

31. त एते सन्धयोऽष्ट विधाः -
कोरोलूखल सामुन्द्ग प्रतर तुन्न सेवनी वायसतुण्डमण्डल शंकावर्ताः ।
तेषां अंगुलि मणिबन्धगुल्फ जानु कूर्परेषु कोराः सन्धयः,
कक्षावंक्षणदशनेषु उलूखलाः, अंसपीठ गुद भग नितम्बेषु सामुद्गाः
ग्रीवा पृष्ठ वंशयोः प्रतराः, शिरः कटीकपालेषु तुन्न सेवन्यः, हन्वोरुभयतस्तु वायस तुण्डाः, कण्ठ हृदय नेत्र क्लोम नाडीषु मण्डलाः,श्रोत्र श्रृंगाटकेषु शंखावर्ताः ।
तेषां नामभिरेव आकृतयः प्रायेण व्याख्याताः ।

These joints are of eight kinds : *kora* (movable, amphiarthrose; hinge joints or gingimus), *ulūkhala* (mortar like, ball and socket), *sāmudgua* (like a box, cavity joint), *pratara* (crossing from one region to the other), *tunnasevani* (like the sutures made on a cut), *vāyasatunḍa* (like the beak of a crow, crow-beak joints), *mandala* (circular, ring like or annular) and *śankhāvarta* (helically spiral).

Of these, the joints at the fingers, the wrist, the ankle, the knee and the elbow are amphiarthrose; at the axil, the groin and the teeth, mortar like; at the shoulder base, the anus, the vulva and the buttocks, like cavity; at the necks and the vertebral column, like a crossing; at the head, the waist and the cranium, like the sutures of a cut; for the jaws on either side, like the beak of a crow; at the throat, the heart, the eye and the trachea, they are annular; at the ears, and the cross-ways, helical. Their shapes are indicated by their very names. Ss. sa. 5, 27, 28

32. अस्थ्नां तु सन्धयो ह्येते केवलाः परिकीर्तिताः ।
पेशीस्नायु सिराणां तु सन्धि संख्या न विद्यते ।।

It is only the joints of the bones that have been mentioned here. There is no counting (i.e., they are innumerable) of the joints of the muscles and the hundreds of the tendons. SS. sa. 5.1

(It is this statement and the fact that Susruta has recognised prabably all structures one could see without even a hand lens, named them well, counted, classified and also listed in an efficient mnemonic style that clearly indicate his thoroughness as an anatomist. His account of the *snāyu* below bears this out still better. A similar thoroughness is seen concerning the *sira* and the *dhamani*. Here however a scope for basic confusion exists. Though *sira* is usually translated (following Dr. Gananatha Sen probably to start with) as vein and *dhamani* as artery, it is not clear if Susruta did grasp the basic difference between the two , viz., that the former carries the pure blood while the latter carries the impure blood. Trying to establish correspondences between the account of vasculature of Susruta and the modern anatomy is a tough question. We omit it totally. In passing we should also note here that there is some opinion that Susruta's *dhamanis* may refer to the nerves.)

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(*a general count of the tendons and ligaments of the body*)

33. नव स्नायु शतानि।

तासां शाखासु षट्शतानि द्वे शते त्रिंशच्च कोष्टे, ग्रीवां प्रत्यूर्ध्वं सप्ततिः। एकैकस्यां तु पादाग्रङ्ल्यां षण्निचितास्तास्त्रिंशत्, तावत्य एव तलकूर्चगुल्फेषु, तावत्य एव जंघायां, दश जानुनि, चत्वारिंशदूरौ, दशवंक्षणे शतमध्यर्धमिवमेकस्मिन् साक्थिनि भवन्तिः एतेन इतर सक्थि बाहू च व्याख्यातौः षष्ठिः कट्यां पृष्ठेऽशीतिः। उरसि त्रिंशत्।

षट् त्रिंशद् ग्रीवायां, मूर्ध्नि चतुस्त्रिंशत्।

The *snayus* are nine hundred. They are six hundred in the limbs, two hundred and thirty in the torso, and seventy above the neck (i.e., supra clavicularly).

In each of the leg, at the toes, they are six each - this way they are altogether thirty. Similar is the number at the sole, the bunch, and the ankle. Similar is at the shank. They are ten in the knee, forty in the thigh, ten at the groin ; in this way (they are altogether) one hundred and seventy in one leg. Same is the case with the other leg and the arms.

In the waist, they are six; at the back, eighty; at the sides, sixty; at the chest, thirty.

In the neck, they are thirty-six; and the head, thirty-four.

(*kinds of the tendons and the ligaments*)

स्नायूश्चतुर्विधा विद्यात् तांस्तु सर्वा निबोध मे।
प्रतानवत्यो वृत्ताश्च पृथ्व्यश्च शुषिरस्तथा।।
वृत्तास्तु कण्डराः सर्वा विज्ञेयाः कुशलैरिह।
आमपक्काशयान्तेषु बस्तौ च शुषिराः खलु।।
पार्श्वोरसि तथा पृष्ठे पृथुलाश्च शिरस्यथ।।

Here it should be noted that the *snāyus* are of four kinds : *pratāna vatī* (branching out, ramifying), *vṛtta* (circular), *pṛthvya* (extending), *suśira* (hollow, i.e., grooved). The ramifying *snāyus* are in the limbs, as well as the joints. The circular *snāyus* are all known as *kaṇḍaras* (i.e., standing out prominently just as the cardinal vessels which are the *kaṇḍaras per se* ?) by the experts. What exist in the stomach, the intestines and the bladder are the grooved variety. At the back, the sides and the chest as well as the head, they are of the extensive variety.

(*function and surgical importance of the tendons and the ligaments* :)

नौर्यथा फलकास्तीर्णा बन्धनैर्बहुभिर्युता।
भारक्षामा भवेदप्सु नृयुक्ता सुसमाहिता।।
एवमेव शरीरेऽस्मिन् यावन्तयः सन्धयः स्मृताः।
स्नायुभिर्बहुभिर्बद्धास्तेन भारसहा नराः।।
नह्यस्थीनि न वा पेश्यो न सिरा न च सन्धयः।
व्यापादितास्तथा हन्युः यथा स्नायुः शरीरिणाम्।।
यः स्नायूः प्रविजानाति बाह्याश्चाभ्यन्तरस्तथा।
स गूढं शल्यमाहर्तुं देहात् शक्नोति देहिनाम्।।

Just as the boat made up of broad planks and endowed with the many tyings, becomes well consolidated and capable of carrying a person and his luggage, verily

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in this way, the person becomes capable of carrying weight as long as he is tied by means of the many ligaments. The body will not get injured that much by the aberrations of either the bones, the muscles or the veins as it would be by the injuries of the ligaments. He, who understands well the ligaments of the body, the superficial as well as the deep seated, he (alone) can remove the *śalya* from the body. Ss. sa. 5.29-36.

(/ *Snāyu*/ is cognate with the Anglosaxon word /*sinew*/ and is translated in general literature (see for e.g., (MW) as tendon, muscle, nerve, vein. But there is no such confusion in Susruta; *snayu* is definitely a ligament and /or a tendon. The distinction modern anatomy makes between ligament as the one that connects muscle and bone while tendon is that which connects bone and bone or mesentery however seems to have *not* been made. In most cases it is ligament; often it may also include tendons. Translating /*snāyu*/ as ligament-tendon, i.e., as both and not either of the two is thus advisable. In general, it is the strong fibrous connective tissue that joins the muscles with bones or bones and bones. These ligaments are classified on their general morphology into 4 types : highly branching or ramifying, circular, extensive (i.e, covering a large area) and grooved (or striated). It would be interesting to see how the counts and the distribution of the ligaments given here correspond with what occurs in modern anatomy, with such an explanation of the ligament in one's mind. One can quaff at these details now, which is very easy. Instead of this, one must patiently enquire as to what can be the correspondences with the limiations of Susruta's times).

(*muscles : a general count and distribution*)

34. पंच पेशीशतानि भवन्ति। तासां चत्वारि शतानि शाखासु, कोष्ठे षट्पञ्चिः, ग्रीवां प्रत्यूर्ध्वं चतुस्त्रिंशत्।

एकैकस्यां तु पादांगुल्यां तिस्रस्तिस्रस्ताः पंचदश, दशं प्रपदे, पादोपरि कूर्चसन्निविष्ठाः तावत्य एव. दशगुल्फतलयोः, गुल्फ जान्वन्तरे विंशतिः, पंच जानुनि विंशतिरुरौ, दश वंक्षणे, शतमेवमेकस्मिन् सक्नि भवति,

एतेन इतर सक्थि बाहू च व्याख्यातौ।

तिस्त्रः पायौ, एका मेढ्रे, सेवन्यां चापरा, द्वे वृषणयोः, स्फिचोः पंच पंच, द्वे बस्ति शिरसि, पंचोदरे, नाभ्यामेका, पृष्ठोर्ध्वसन्निविष्ठाः पंच पंच दीर्घाः, षट् पार्श्वयोः, दश वक्षसि, अक्षकासौ प्रति समन्तात् सप्त, द्वे हृदयमाशयोः, षट् यकृत् प्लीहोण्डु (न्दु) केषु,

ग्रीवायां चतस्रः, अष्टौ हन्वोः, एकैका काकलक गलयोः, द्वे तालुनि, एका जिह्वायां, द्वे ओष्ठयोः, द्वे नासायां, द्वे नेत्रयोः, गण्डयोः चतस्त्रः, कर्णयोः द्वे, चतस्त्रो ललाटे, एका शिरसीति;

एवमेतानि पंच पेशीशतानि।।

The muscles are five hundred. Of them, four hundred are in the limbs, thirty-six in the torso, beyond the neck above, thirty-four. (Further distribution of the muscles is as follows).

In each of the leg, at the toes there are three each of these muscles, thus fifteen; ten in the forefoot (*prapada*) : a similar number only (i.e., ten) in the bunch over the foot; ten in the ankle and the sole; thirty in the interval between the ankle and the knee, five in the knee, thirty in the thigh; ten in the groin and in this way one hundred altogether at the leg. Similar is the case for the other leg and the arms.

They are three at the anal aperture (*pāyu*); one in the penis; one in the suture (below the penis); two in the testicles; in the buttocks five each; two, at the head of the bladder; five, at the stomach; one in the navel; five, situated on the upper side of the back; five each on either side of the long muscles; six on the sides; ten

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at the chest; all around each of the collar bone and the shoulder joint, seven; two in the heart and the receptacle and six in liver, the spleen and the caecum.

They are four in the nape of the neck; eight in the jaws; one alone at the larynx; two at the palate; one in the tongue, in the lips; two in the nose, two in the eyes; four in the cheek; two in the ear; four in the forehead; one in the head - in this way, they are five hundred. Ss. sa. 5.4.48

(*function*)

सिरास्नाखस्थिपर्वाणि सन्धयश्च शरीरिणाम्। पेशीभिः संवृतान्यत्र बलवन्ति भवन्त्यतः ।।

Veins, ligaments, bones and joints are surrounded by the muscles and thus become strong. Ss. sa. 5.40

(*difference in muscle count between the sexes*)

स्त्रीणां तु विंशतिरधिका। दश तासां स्तनयो रेकैकस्मिन् पंच पंचेति, यौवने तासां परिवृद्धिः ।
अपत्यपथे चतस्रः - तासां प्रसृतेऽभ्यन्तरतो द्वे, मुखाश्रिते बाह्ये च वृत्ते द्वे गर्भच्छिद्रसंश्रितास्तिस्रः ।
शुक्रार्तव प्रवेशिन्य स्विस्र एव। पित्तपक्काशयोर्मध्ये गर्भशय्या।

For the women, there are thirty muscles extra. Of these, five each are in the breasts, and thus ten and these develop at puberty. In the path of the child (i.e., uterus) there are four. Of them two are towards the inside of the spead-out thighs; two situated at the mouth and surrounding it; three situated at the foetal tissue; three again are the passage for the semen and the oestrum. The womb is in the middle of the liver and the intestine. Ss. sa. 6.50-51

(*shapes* :)

तासां बहल पेलव स्थूलाणु पृथु वृत्त ह्रस्व दीर्घ स्थिर मृदु श्लक्ष्ण कर्कशभावाः सन्ध्यस्थिसिरा स्नायु प्रच्छादका यथाप्रदेशं स्वभावत एव भवन्ति।

Since intermingled here and there among the muscles occur the joints, the bones, the veins, and the ligaments covering them, these muscles naturally acquire as per the region concerned (such varied morphological features as) extensiveness or delicateness, grossness or minuteness, broadness or roundness, shortness or elongatedness, firmness or softness and smoothness or roughness. Ss. sa. 5.52.

पुंसा पेश्यः पुरस्ताद्याः प्रोक्ता लक्षणमुष्कजाः। स्त्रीणामावृत्य तिष्ठन्ति फलमन्तर्गतं हि ताः।

What has been said earlier about the muscles of the man that occur in his penis and the testes, they alone occur (i.e., we have strict analogy here) in the woman surrounding the inner fruit (i.e., the foetus). Ss. sa. 5.53

(Though so many details are given, it is interesting to note that no mention of nerves as a distinct anatomic entity occurs. It is unlikely however that Susruta would not have seen the nerves, though he might not have realised their value, i.e., that they are structures that mediate between the mind on the one hand and the sensors. For the word /*neura*/ which is the root for /nerve/ though etymologically it stands for just a sinew, there is no Sanskrit equivalent. /*Tantrika*/ which is to stand for nerves in modern books of regional languages specially, Hindi, Marathi, etc., i.e. of the North India, is a recent coinage from /*tan*/ stretch. However, in the Southern regional languages, the word for nerve is phonetically just the same, e.g.,

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/ nyarambu/ in Tamil, */ nara/. / naramu/*, in Kannada and Telugu. How */ neuro/* of Latin is related to this */ nyarmabu/* if related at all, is interesting to be studied. For both the *sira* and the *dhamani* however there are separate Chapters specially to discuss their detailed distribution or *vyakaraṇa* i.e., splitting further. Trying to establish correspondence between these accounts and what occurs in modern anatomy is a difficult task. This is not attempted at all here.)

35. शंकुनाभ्याकृति र्योनिस्त्रयावर्ता सा प्रकीर्तिता।। तस्यास्तृतीये त्वावर्ते गर्भशय्या प्रतिष्ठिता।।
यथा रोहितमत्स्यस्य मुखं भवति रुपतः। तत्संस्थानां तथा रुपां गर्भशय्यां विदुर्बुधाः।।

The vagina is of the shape of the navel of a conch and is enclosed within three rings. The uterus (the womb) is situated within the third enclosure.

As the face of the *rohiṣa* fish in shape, similar is the form and shape of the uterus. The wise know it (to be) so.

आभुग्नोऽभिमुखः शेते गर्भो गर्भाशये स्त्रियाः। स योनिं शिरसा याति स्वभावात् प्रसवं प्रति।

The foetus lies a little bent and facing against in the uterus of women. By nature it enters the vagina by the head - forward at the time of delivery. Ss. sa. 6. 43-44.

e. *a general assessment and instructions for dissection*

36. त्वक् पर्यन्तस्य देहस्य योऽयमंगविनिश्चयः।
शल्यज्ञानादृते नैष वर्ण्यतेऽंगेषु केपुचित्।।

Such a (detailed) ascertainment and the settled opinion of the organs of the body upto the skin (as has been delineated as above) cannot be described, without the help of surgery.

तस्मात् निःसंशयं ज्ञानं हर्त्रा शल्यस्य वांछता।
शोधयित्वा मृतं सम्यक् द्रष्टव्यो अंग विनिश्चयः।
प्रत्यक्षतो हि यद्दृष्टं शास्त्रदृष्टं च यद्भवेत्।
समासतः तदुभयं भूयो ज्ञानविवर्धनम्।।

That is why, he who desires to operate out the *śalya* should see himself this ascertainment of the organs by investigating properly on the dead. When what is seen by direct observation becomes also seen (i.e., settled) by the Technical Treatises (*śastras*) these two together in brief will serve for increasing one's knowledge (and expertise excessively).

तस्मात् समस्तगात्रं अविपोपहतं अदीर्घव्याधिपीडितं अवर्ष शतिकं निःसृष्टान्त्रपुरीषं आवहन्त्यां आपगायां निबद्धं पंजरस्थं मुंजवल्कल कुश शणादीनामन्यतमेन आवेष्टितांगं अप्रकाशे देशे कोथयेतु, सम्यक् प्रकुथितं चोद्धृत्य, ततो देहं सप्तरात्रात् उशीर बाल वेणु वल्वजकूर्चानां अन्यतमेन शनैः शनैरवघर्षयन् त्वगादीन् सर्वानेव बाह्याभ्यन्तरानंग प्रत्यंगविशेषान् यथोक्तान् लक्षयेच्चक्षुषा।

न शक्यः चक्षुषा द्रष्टुं देहे सूक्ष्मतमो विभुः। दृश्यते ज्ञान चक्षुभिस्तपश्चक्षुभिरेव च।।
शरीरे चैव शास्त्रे च दृष्टार्थः स्यात् विशारदः। दृष्ट श्रुताभ्यां संदेहं अवापोह्य आचरेत् क्रियाः।।

Therefore, bind the corpse of a person in a case and place it in a sheltered portion of the river where there is not much flow; a person who possesses all the

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limbs in tact; he should not have been killed by any poison, neither should he have been suffering from a chronic disease. He should be below hundred years and his faecal matter should have been removed from the intestines. (Take care thus to select a specimen as near to normalcy as possible). Putrify each individual organ (as well) in a hidden place tying it first by means of *munja* grass, inner bark, *kuśa*, sun hemp or any other similar (packing) material. When it is properly purtrified (by such a measure) remove it out (from the water) and by going on rubbing it slowly and slowly by means of the *uśīra* grass, tender bamboo, brush of the inner bark or any other similar material (that can yield a coarse fibre), see and find out with your own eyes for seven days, each and every organ and the specialities thereof as indicated in the Text.,

(Still, i.e., in spite of all these precautions) the subtlest and the all pervading lord that dwells within the body (i.e. the *śarīri* or, the soul) cannot be seen by our eyes within this body. This can be seen by the eyes of knowledge as well as the eyes of penance.

In the body as well as in the *śāstras* (concerned with it), the expert should clearly discern the meaning (for instance, the chief point as well as the implication). One who has seen thus as well as heard thus, he alone can proceed in (his) surgical practices avoiding all doubts (when the time comes for an actual operation). Ss. sa. 5. 56-63.

f. *the marmas or the vulnerables*

(i) (*placement* :) (*Marmas* are the particularly vulnerable spots, i.e. localised regions of small dimensions. They were clearly recognised and described as occurring in several regions of the living body and demanding careful attention on the part of the operating surgeon. For, any inadvertent injury there would be particularly painful, debilitating or even fatal. Recognition of such spots and the detailed consideration given to them is a definite proof that what is written here is the result of actual practical experience and not mere theoretical surmisings that are drawn at variance with objectivity. The excellence of Suśruta as a routine and practising surgeon directly acquainted with the facts he talks about unambiguously is best revealed in this portion of the marmas. There is also a tradition that there are *bindusthānas* or point-locations in the body - which are small, sharply circumscribed spots on its surface that are of vital importance. This may correspond to the concept of acupuncture in a way. MW states that the term/ *bindu* /, a point also means a mark like a dot made in cautery and attributes this to Susruta. We meet with such bindus in the account of eye surgery. All these however represent at present a grey area of scholarship that may reveal bright spots by future workers.

It is very likely that the knowledge of these *marmas* was of great value in treatises on Yuddha *Śāstra* (Treatises of Warfare) of those time, where we may expect some further considerable elaboration. MW mentions an Yuddha *śāstra* written by Viswamitra, whose son is Susruta. However such works are still untraced and unstudied. Another work which may give further points of relevance to the existence of the *marmasthanas* and/or surgery or removal of the *śalyas* there, is: Dhanurveda or the Science of Archery - an ancient treatise regarded as an Upaveda connected with Yajur veda and derived from Viswamitra.

It is interesting to make out the following points. The word / *jujutsu*/ of Japan for an art of fighting, locally prevalent, is cognate to / *yuyutsu*/ of Sanskrit, meaning,

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'eager to fight'. This deals with practising debilitating wrestling manipulations of the opponent's body by holding or working upon specific regions of it. It may be worthwhile to study the detalis here, and compare to what Susruta gives out as a surgeon, specially as this skill is believed to have been developed by an Indian Buddhist monk of ancient times for his own defences. The medical art of China - acupuncture, specialises in manipulating by needle, specific nerve centres of the body, mainly to alleviate pain or particular diseases. In theory, these also can be regarded as *marmasthānas* . How far these correspond to Susruta's spots is a different point. However, there is no denial of at least the academic interest in further speculations along with lines of comparison of Susruta, jujutsu and acupuncture - famous thinkings of three ancient and neighbouring cultures).

37. सप्तोत्तरं मर्म शतम्। तानि मर्माणि पंचात्मकानि भवन्तिः तद्यथा-मांस मर्माणि, सिरा मर्माणि स्नायु मर्माणि, अस्थिमर्माणि, सन्धिमर्माणि चेति। न खलु, मांससिरा स्नाय्वस्थिसन्धि व्यतिरेकेण अन्यानि मर्माणि भवन्ति, यस्मान्नोपलभ्यते।

We shall now comment upon that aspect of (the science of the human) body that (serves to) indicate every *marma* (therein).

The *marmas* are hundred and seven. They are of five (different) natures, as follows : *marmas* of the soft parts or flesh, the blood vessels, the tendons and ligaments and the bones and the joints. Excluding these (structures viz.,) the soft parts, the blood vessels, the tendons and ligaments, the bone and the joints, there will be no other *marmas* ; these latter do not occur at all . Ss. sa. 6. 1-3.

(It is intriguing to find that there are no *marmasthanas* of the nerves. Excepting for the mention of *jnānavaha srotas* - cognising channels (where however no further details are given), no knowledge of nerves seems to be displayed in SS. It is difficult to explain this strange lacuna. For, nerves as such are not *that* difficult to find specially for such experts as Susruta who could describe the course of the blood vessels quite extensively. Should we therefore include that the account of *dhamanis* are actually the account of the nerves at least in some way as a few have in fact already suggested. It looks that this problem needs fresh scholarship. To a tradition which has correctly deciphered the seat of mind as the brain situated between head, i.e., the scalp and the palate (cf. Bhela), not knowing the nerves appears to be inexplicable. It looks that our reading of the Text is somewhere defective. The account of the *marmas* as given in Susruta is of the same nature and purpose as in the previous section of Enumerative Anatomy. This is: to give valuable informations for surgery succinctly and in a form that would serve mnemonics best).

38. तत्र एकादश मांसमर्माणि, एकचत्वारिंशत् सिरामर्माणि, सप्त विंशतिः स्नायुमर्माणि, अष्टौ अस्थि मर्माणि, विंशति सन्धिमर्माणि चेति। तदेतत् सप्तोत्तरं मर्मशतम्।

Therein, eleven (of the *marmas*) are of the soft parts; forty one, of the blood vessels; twently-seven, of the tendons and ligaments; eight, of the bones; and twenty, of the joints; in total, one hundred and seven.

39. तेषां एकादशैकस्मिन् सक्थ्नि भवन्ति, एतेनेतर सक्थि बाहू च
व्याख्यातौ, उदरोरसोः द्वादश, चतुर्दश पृष्ठे, ग्रीवं प्रत्यूर्ध्वं सप्त विंशत्।।
तत्र सक्थिमर्माणि क्षिप्रतल हृदय कूर्च कूर्चशिरोगुल्फेन्द्रबस्ति जान्वाण्युर्विन्लोहिताक्षाणि विटपं चेति, एतेनेतरत्सक्थि व्याख्यातम्।

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उदरोरसोस्तु गुद बस्ति नाभि हृदय स्तनमूल स्तन रोहित अपलापनि अपस्तम्भौ चेति।
पृष्ठ मर्माणि तु कटीक तरुण कुकुन्दर नितम्ब पार्श्वसन्धि बृहत्यंस फलकान्यंसौ चेति।
बाहु मर्माणि तु शिप्र तलहृदय कूर्च कूर्चशिरो मणिबन्ध इन्द्रबस्ति कूर्परण्युः विल्लोहिताक्षाणि कक्षधरं चेति, एतेन इतरो बाहुर्व्याख्यातः।
जत्रुण ऊर्ध्वं चतस्रो धमन्योऽष्टौ मातृका द्वे कृकाटिके द्वे विधुरे द्वे फणे द्वावपाङ्गौ द्वावावर्तौ द्वावुत्क्षेपौ द्वौ शंखौ एका स्थपनी पंच सीमन्ताः चत्वरि शृंगाटकानि एको अधिपतिरिति।

Of these (*marmas*), eleven occur in one leg. By this we state about the other leg as well as the two arms (i.e., everyone of these latter also has a similar number, viz., eleven). Of the belly and the chest, they are twelve. On the back, i.e., dorsum (they are) fourteen and beyond the neck, thirty-seven. The (*marmas*) of the leg are (named as): *kṣipra* (*the quick - effect of the śalya here is very quick*), *talahṛdaya* (*the heart of the flat surface, sole; situated in the midpoint of the sole*), *kūrca* (*the brush; metatarsus, for the bones here, viz., the 5 metatarsals radiate out, separately as do the fibres from the handle of a brush, from the united bones of the tarsum*), *kurcasira* (*the tarsum*), *gulpha* (ankle), *indrabasti* (Indra's residence ; *a clear fancy name*), *janvani* (the knee cap; literally the nail at the knee), *urvi* (of the thigh), *lohitaksa* (*referring to the prominent blood vessels localised there which make the surface appear red*), *vitapa* (the thicket; *referring to the presence of a thicket like growth of may vessels there*?). Similar is the case for the other leg.

Of the belly and the chest (the *marmas* are named as:) *guda* (the rectum), *basti* (the bladder), *hṛdaya* (the heart), *stana mula* (the root of the breasts), *stana rohita* (the out-growth of the breasts - the teats), *apalāpāni* (that divert*) and *apastambhau* (the two pillars thar divert*). 4-6

(*Apalapani* is from the root/ *apalap* / to conceal away; *apalāpana* is the part between the shoulder and the ribs. *Apalapani* is in plural, i.e, signifying many while *apastambhau* is a clear dual, i.e, signifying a structure which is in twos. They are said to be situated in the chest. On these criteria, it is probably correct to say that *apalāpāni* refers to the innumerable branches of the bronchioles that lie concealed within the lung mass (actually the word literally means "concealed away" or"from"), while the *apastambhau* refers to the always two bronchi that enter into the lung from the trachea. These are moreover stated to be situated adjascent to the heart).

The *marmas* of the back (are named as): the two *katika taruṇa* (the tender hips, i.e., the soft hip regions on either side below), the two kukundara (the gluteal cavities at the loins on either side), the two *nitamba* (the buttocks), the two *pārsva sandhi* (the two - sets of - rib joints of the thoracic cage on either side), the two *bṛhatī* (the two great), the *amsa phalakāni* (the two shoulder blades) and the two *amsa* (the two shoulders).

The *marmas* of the arm (are named as): the *ksipra* (the quick), *talahrdaya* (the heart of the palm), *kurca* (the brush), *kurca sira* (the brush head), *manibandha* (the wrist), *indrabasti* (Indra's residence), *kurpara* (the elbow), *urvi* (the inner side of the upper arm corresponding to the thigh of the leg), *lohitakṣani* (the red eyed) and *kaksa dhara* (the arm-pit holder). Similar is the case for the other arm.

The *marmas* above the clavicle are: the four *dhamanis* (the internal and the external jugulars on either side of the neck ?*) the eight *matṛkas* (the prominent further branches of the 4 jugulars that supply to the two sides of the head; these

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are 4 on either side, viz., anterior facial, transverse facial, superficial temporal and posterior jugular. The further ramifications of these 4 can be said to form a matrix or *matṛka* of the blood vessels on either side of the face and the head together *) the two *kṛkaṭikas* (the two broad laminae of the thyroid cartilage of the larynx, *krka*, united anteriorly to form a V-shaped structure ?*), the two *vidhura* (the two particular joints of the body - the solitary, i.e., the unpaired ? *vidhura* - means a widower, i. e, a single person), the two *phaṇa* (the two expanded (hood like) sides of the nose, the 2 alae*), the two *apanga* (the two end corners of the two eyes), the two *āvarta* (the two depressions, the whirls, of the forehead above the eyebrows), the two *utkṣepa* (the two regions - the thrown-ups - above the two temples*), the two *śankha* (the two temporal bones : or the two conch like swellings behind the ears ?*), one *sthapani* (the space between the two eyebrows), five *sīmanta* (lines of separation between the bones, i.e, marking the limits or the bounds of the bones - the skull sutures*), four *śṛngaṭaka* (where four or several roadways of structures meet, the cross way * - the sinuses on either side of the nose*) and one *adhipati* (a particular part of the head, where a wound proves instantly fatal. Is this just the scalp or better, the brain itself - the master vital spot?*) Ss. sa. 6.6

40. तत्र तलहृदयेन्द्र बस्ति गुद स्तनरोहितानि मांस मर्माणि।
नील धमनी मातृका शृंगाटका अपाङ्ग स्थपनी फण स्तनमूल अपलाप अपस्तंभ हृदय नाभिपार्श्व सन्धि बृहती लोहिताक्षोर्व्यः सिरा मार्माणि।
आणी (णि) विटप कक्षधर कूर्च कूर्च शिरो बस्ति क्षिप्रांसविधुरोत्क्षेपाः स्नायु मर्माणि।
जानु कूर्पर सीमन्ताधिपति गुल्फ मणि बन्ध कुकुन्दरावर्त कृकाटिकाश्चेति सन्धि मर्माणि।

Herein, *talahṛdaya, indrabasti, guda, stana rohita* - these are the *marmas* of the soft parts.

Niladhamani, matrka, śṛngaṭaka, apanga, sthapani, phana, stana mula, apalāpa, apastambha, hṛdaya, nabhi, pārśva sandhi, bṛhati, lohitākṣha, urvi - these are the *marmas* of the (blood) vessels.

Aṇi, viṭapa, kaksa dhara, kurca sira, basti, ksipra, amsa, vidhura, utkṣepa - these are the *marmas* of the tendon-liganments (*kūrca*, the parts of the body like the hands, the feet, the neck, and the membrum virile, where a bunching or a bundling of many structures occur).

Kaṭikataruṇa, nitamba, amsaphalaka, sankha - these are the *marmas* of the bones.

Jānu, kūrpara, sīmanta, adhipati, gulpha, maṇibandha, kukundara, avarta, kṛkāṭika - these are the *marmas* of the joints. Ss. sa. 6.7

Clinial effects of the śalya in the different marmas

41. तान्येतानि पंच विकल्पानि भवन्तिः तद्यथा -
सद्यः प्राणहराणि, कालान्तर प्राणहरणानि, विशल्य घ्नानि, वैकल्य कराणि रुजाकराणि चेति।
तत्र सद्यः प्राण हराणि एकोन विंशतिः, कालान्तर प्राण हरणानि त्रयस्त्रिंशत्, त्रीणि विशल्यघ्नानि, चतुश्चत्वारिंशत् वैकल्यकराणि, अष्टौ रुजाकराणि इति।

All of these *marmas* are of five categories (on the basis of the clinical effects of injury on them) as follows : 1. immediately fatal, 2. belatedly fatal, 3. post

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extraction fatal, 4. debilitating and 5. painful. The immediately fatal are nineteen; the belatedly fatal, thirty-three; the post extraction fatal, three, the debilitating, forty-four; and, the painful, fourteen. Ss, sa. 6.8

42. शृंगाट कानि अधिपतिः शंखौ कण्ठ सिरा गुदम्।
हृदयं बस्ति नाभ्यौ (भी) च घ्नन्ति सद्यो हृतानि तु।।
वक्षोमर्माणि सीमन्त तल क्षिप्र इन्द्र बस्तयः।
कटीक तरुणे सन्धी पार्श्वजौ बृहती च या।।
नितम्बाविति चैतानि काळान्तर हराणि तु।
उत्क्षेपौ स्थपनी चैव विशल्य घ्नानि निर्दिशेत्।।
लोहिताक्षाणि जानूर्वीकूर्चविटप कूर्पराः।
कुकुन्दरे कक्षधरे विधुरे सकृकाटिके।।
अंसांस फलकापांगा नीले मन्ये फणौ तथा।
वैकल्यकरणानि आहुः आवर्तौ द्वौ तथैव च।।
गुल्फौ द्वौ मणि बन्धौ द्वौ द्वे द्वे कूर्चीशिरांसि च।
रुजाकराणि जानीयात् अष्टावेतानि बुद्धिमान्।।
क्षिप्राणि विद्धमात्राणि घ्नन्ति कालान्तरेण च।

The *srngatakas*, the *adhipati*, the *sankhas*, the four blood vessels of the neck, the rectum, the heart, the bladder, the navel- these (viz., the injury in them) will kill the patient immediately when they are hurt. The *marmas* of the chest, the *simanta*, the *talahrdaya* the *kṣipra*, the *indrabasti*, the *kaṭika taruṇa*, the joints of the ribs and the *brhati* and the *nitambas* - these are belatedly fatal. The *utksepas* and the *sthapani* are post extraction fatal. The *lohitakṣas*, the *jānu*, the *urvi*, the *kurca*, the *viṭapa*, and the *kurpara*, the *kukuṇdaras*, the *kakksadharas*, the *vidhura* and the *kṛkaṭikas*, the *amsa*, the *amsaphalaka*, the *apanga*, the *nilas*, the *manyas* and the *phanas* and the two *avartas* - these are debilitating (i.e., they will cause permanent debility). The two ankles, the two wrists, the four *kurcaśira* - the wise should know that these eight are painful (they will only pain but do not lead to any permanent debilitation). The *kṣipra* will bring death after sometime even if it is just penetrated. Ss. sa. 6. 9-14.

43. मर्माणि मांस सिरास्नाय्वस्थिसन्धिपाताः, तेषु स्वभावतएव विशेषेण प्राणास्तिष्ठन्तिः तस्मात् मर्मसु अभिहताः तांस्तान् भावान् आपद्यन्ते।

By the very name of *marmas* (we should note that here i.e., in the site of these *marmas*), the soft parts, the blood vessels, the tendons and ligaments, the bones and the joints - all come together and because of the very nature of such a composite type, life, i.e., vitality (can be said to be) specially residing in these places. That is why, when the *marmas* are injured, there wil arise the particular state as is concerned with the situation (as detailed above). Ss. sa. 6. 15.

44. ततः क्षते मर्मणि ताः प्रवृद्धः
समन्ततो वायुरभिस्तृणोति।
विवर्धमानस्तु स मातरिश्वा
रुजः सुतीव्राः प्रतनोति काये।।
रुजाभिभूतं तु ततः शरीरं

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प्रलीयते नश्यति चास्य संज्ञा।
अतो हि शल्यं विनिहर्तुमिच्छन्
मर्माणि यत्नेन परीक्ष्य कर्षेत्।।

Therefore when (any of) the *marmas* gets hot (i.e., subjected to the influence of *agni* because of the injury there) the effect gets augmented and the *vāyu* scatters the effect of this all around and in this way since the great *vāyu* is augmented, a very acute pain spreads about in the body. The body is then struck by pain. Its consciousness is thus lost. Therefore, if one wishes to remove the *śalya*, one should take effort to examine the *marmas* which one is likely to damage by one's (own) act of removal and then only pull it out. Ss. sa. 6. 19, 20.

45. तत्र, सद्यः प्राणहरमन्ते विद्धं कालान्तरेण मारयति, कालान्तर प्राणहरमन्ते विद्धं वैकल्यमापादयति, विशल्यघ्नं वैकल्यकरं च भवति, वैकल्यकरं कालान्तरेण क्लेशयति रुजां च करोति,
रुजाकरं अतीव्र वेदनं भवति।

Therein we should note that if an injury is done near about the immediately fatal, it will kill belatedly. If (this is) near the belatedly fatal, (it) causes debilitation; (if it is near) the post-extraction fatal, (it causes) a debilitating; (if near) the debilitating, (it) causes the trouble belatedly and a pain. If near the painful, it causes not so acute an amount of pain.

तत्र सद्यः प्राणहराणि सप्तरात्राभ्यन्तरात् मारयन्ति, कालान्तर प्राणहराणि पक्षात् मासात् वा, तेष्वपि तु क्षिप्राण कदाचिदाशु मारयन्ति, विशळ्य प्राणहराणि वैकल्य कराणि च कदाचिदत्यभिहतानि मारयन्ति।

Therein, the immediately fatal will bring about death within seven nights . The belatedly fatal, in a fortnight or a month; therein if the *kṣipra* (is involved), it would probably kill immediately. Among the post-extraction-fatal and the debilitating ones also, the injury will kill immediately if it is excessive. Ss. sa. 6.

46. अत ऊर्ध्वं सक्थि मर्माणि व्याख्यास्यामः -
तत्र पादस्य अंगुष्ठांगुल्ययोर्मध्ये क्षिप्रं नाम मर्म, तत्र विद्धस्य आक्षेपकेण मरणं, मध्यमांगुलीमनु पूर्वेण मध्ये पादतलस्य तलहृदयं नाम, तत्र रुजाभिर्मरणं; क्षिप्रस्य उपरिष्टादुभयतः कूर्चो नाम, तत्र पादस्य भ्रमण वेपने भवतः, गुल्फसन्धेः अध उभयतः कूर्चीशरः, तत्र रुजाशोफौ;
पाद जंघयोः सन्धाने गुल्फः, तत्र रुजः स्तब्धपादता खंजता वाः प्रार्ष्णि प्रति जंघाडामध्ये इन्द्र बस्तिः, तत्र शोणित क्षयेण मरणं; जंघोर्वोः सन्धाने जानु, तत्र खंजता, जानुन ऊर्ध्वं उभयतः त्र्यंगुलमाणी, तत्र शोफाभिवृद्धिः स्तब्धसक्थिता चः ऊरुमध्ये उर्वी, तत्र शोणित क्षयात् सक्थि शोषः, उर्व्या ऊर्ध्वं अधो वंक्षण सन्धेः ऊरुमूले लोहिताक्षं, तत्र लोहितक्षयेण मरणं पक्षाघातो वाः वंक्षण वृषणयोरन्तरे विटपं, तत्र षाण्ढयं अल्प शुक्रता वा भवतिः
एवमेतनि एकादश सक्थि मर्माणि व्याख्यातानि। एतेन इतर सक्थि बाहू च व्याख्यातौ। विशेषतस्तु यानि सकथ्नि गुल्फजानु विटपानि, तानि बाहौ मणिबन्ध कूर्परकक्षधराणिः यथा वंक्षण वृषणयोरन्तरे विटपं एवं वंक्षः कक्षयोर्मध्ये कक्षधरं तिस्मिन् विद्धे त एव उपद्रवाः,
विशेषतस्तु मणिबन्धे कुण्ठता, कूर्पराख्ये कुणिः, कक्षधरे पक्षाघातः एवमेतानि चतुश्चत्वाशित् शाखासु मर्माणि व्याख्यातानि।

Henceforth we shall comment upon the *marmas* of the limbs.
There is a *marma* called the *kṣipra*, between the great toe and the nearest toe of the foot. If this is injured, there will be death accompanied with convulsion.

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Corresponding to the middle toe and in the middle of the surface of the foot, there is a *marma* called *tala hṛdaya*. On injury there, death will ensue accompanied with pain. Above the *kṣipra* and on either side, a *marma* by name *kūrca* exists. (By) injury here, there will arise a twisting of the foot and a trembling. Below the ankle joint and on either side there is a *marma*, *kūrca śira* by name. Injury here leads to pain and morbid swelling.

At the place where the foot and the shank meet is the *gulpha* or the ankle. Injury here leads to pain, stiff foot and lameness. Towards the heel and in the middle of the shank, a *marma* called *indrabasti* occurs. (On injury here) there will be death, by loss of blood. At the place of joining of the shank and the thigh, (the *marma* called) *jānu* occurs. Lameness will arise here. Above the knee on either side there is *āṇi* of three inches; there (i.e., by an injury there), an augmentation of the morbid swelling and still - limb (will arise). In the middle of the thigh is *urvī*; there, because of the loss of blood, a wasting of the limb (will ensue). Above the *urvī* and below the groin joint and at the beginning of the thigh is *lohitākṣa*; there, death by the loss of blood or paralysis. Between the groin and the testicle, is *viṭapa*; there, impotency or smallness in the semen content.

This way the eleven *marmas* of the limb are commented upon. The same applies to the other leg and the two arms.

The speciality to be noted is just this : what are gulpha, *jānu* and *viṭapa* in the leg, they are *maṇi bandha*, *kūrpa* and *kakṣadhara* in the arm. As there is *viṭapa* between the groin and the testicle, there is *kakṣadhara* between the chest and the axil; if struck there, the after effects (*upadravas*) are the same. The speciality is, in *maṇibandha*, *kuntḥatā* or a lameness will arise; in *kūrpara*, *kuṇi* or a crookedness and in *kakṣa dhara*, a paralysis.

Thus these forty-four *marmas* of the limbs have been commented. Ss. sa. 6.24.

47. अत ऊर्ध्वं उदरोरसोः मर्माणि अनुव्याख्यास्यामः -

तत्र वातवर्चो निरसनं स्थूलान्त्र प्रतिबद्धं गुदं नाम मर्म, तत्र सद्यो मरणं, अल्पमांस शोणितोऽभ्यन्तरतः कट्यां मूत्राशयो बस्तिः, तत्रापि सद्यो मरणं अश्मरीव्रणादृते, तत्रापि उभयतो भिन्ने न जीवति, एकतो भिन्ने मूत्रस्रावी व्रणो भवति, स तु यत्नेन उपक्रान्तो रोहतिः पक्वामाशयोर्मध्ये सिराप्रभवा नाभिः, तत्रापि सद्यो मरणंः स्तनयोर्मध्य मधिष्ठाय उरस्यामाशयद्वरं सत्व रजस्तमसामधिष्ठानं हृदयं, तत्रापि सद्य एव मरणं, स्तनयोरधस्ताद् द्व्यंगुल मुभयतः स्तन मूले, तत्र कफ पूर्ण कोष्ठतया (कासश्वासाभ्यां) म्रियते, स्तनचूचुकयोरुर्ध्वं द्व्यंगुलमुभयतः स्तन रोहितौ, तत्र लोहितपूर्ण कोष्ठतया कास श्वासाभ्यां च म्रियतेः अंसकूटयोरधस्तात् पार्श्वोपरि भागयोरपलापौ नाम, तत्र रक्तेन पूय भावं गतेन मरणं,

उभयत्र उरसो नाऽयौ वातवहे अपस्तम्भौ नाम,
तत्र वातपूर्ण कोष्ठतया कासश्वासाभ्यां च मरणम्;
एवमेतानि उदरोरसोः द्वादश मर्माणि व्याख्यातानि।

Henceforth we shall tell about the vulnerables or the *marmas* of the belly and the chest.

Therein, there is the *marma* called *guda* (the rectum) which is the exit point of the wind (flatus) and the stools and is also the enclosure of the large intestine. There (i.e., injury there will result in), immediate death. In the interior of the waist there is the *marma* called *basti*, which is the receptacle of urine; this is of little (i.e., scanty) soft flesh and blood. There also it (i.e., the injury) will be immediately fatal if it is by any means other than urinary calculus. Even when there is this calculus, if it occurs on either side, the patient will not live. If only one side

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is injured, there will arise a wound that will be (persistently) discharging urine. This will heal up only by a great effort. In the middle of the intestine and the stomach, there is the navel which originates many *siras*. There (i.e., injury here) also (results in) immediate death. Situated between the breasts, in the chest and at the gateway of the *āmaśaya* (stomach i.e., just anterior to stomach) is the heart. This is the abode of *satwa*, *rajas* as well as *tamas*. There also, immediate dealth. Below the breasts, two inches long on either side are the two *stana mūlas* (This is actually the region of the lungs situated within). There, because of the filling up by *kapha* (during coughing and difficult breathing) death will ensue. Above the teats, two inches on either side are the *stana rohitas*, (This is the region of the base of the lungs). Death will ensue there, if they are filled with blood (during coughing and difficult breathing). The two *apalāpa marmas* are below the *amsa* (the shoulders) and the *kūṭa* (the projection, of the clavicle ?*) and above the sides (the ribs?). Death ensues by blood when it becomes (filled with) pus, here (during injury).

The two *apastambhas* are on either side of the chest, they are the *naḍis* or the tubulars conducting wind. Death arises there, if their calibre is filled with *vāta* during cough and difficulty in breathing (if, otherwise).

Thus, these 12 *marmas* of the abdomen and the chest have been commented. Ss. sa. 6. 25.

48. अत ऊर्ध्वं पृष्ठमर्माणि व्यख्यास्यामः - तत्र पृष्ठवंशमुभयतः प्रति श्रोणिकाण्डमस्थिनी कटीकतरुणे, तत्र क्षोणितक्ष्यात् पाण्डु विंवर्णो हीन रुपश्च म्रियतेः पार्श्वयोः जघनबहिभागि पृष्ठवंशमुभयतो कुकुन्दरे, तत्र स्पर्शाज्ञानमधः काये चेष्टोपघातश्चः

श्रोणी काण्डयोः उपरि आशयच्छादनौ पार्श्वान्तरप्रति,

बद्धौ नितम्बौ, तत्र अधःकाय शोषो दौर्बल्याच्च मरणं, अधः पार्श्वान्तरप्रतिबद्धौ जघनपार्श्वमध्ययोः तिर्यगूर्ध्वं च जघनात् पार्श्वसन्धी, तत्र लोहितपूर्ण कोष्ठतया म्रियतेः

स्तन मूलादृजूभयतः पृष्ठवंशस्य बृहती तत्र शोणितातिं प्रवृति निमित्तैः म्रियते

पृष्ठोपरि पृष्ठ वंशमुभयतः त्रिकसंबद्धे अंसफलके, तत्र बाहोः स्वापशोषौः

बाहुमूर्धग्रीवामध्ये अंसपीठस्कन्धबन्धनावंसौ, तत्र स्तब्धबाहुताः

एवमेतानि चतुर्दश पृष्ठमर्माणि व्याख्यातानि।

Henceforth, we shall comment on the *marmas* of the dorsum. Therein, on either side of the midrib (*pṛṣṭa vamsa*) in the bone at every *śroṇī kāṇḍa*, there is a *kaṭīka taruṇa*. There, (if injured), he (i.e., the patient) will die by a loss of blood, blanched, decoloured as well as deformed. On the sides at the outer portion of the buttocks, on either side of the midrib is the *kukundara*. There, loss of the sense of touch and inactivity of the body, below (will ensue).

Above the *śroṇī kāṇḍaka* and covering up the (urinary receptacle) and adherent (*pratibaddha*) to the interior of the sides, are the two *nitambas* - the buttocks. There, a wasting out the body below, a weakness and death. Adherent below the in-betweens (i.e., the middle regions) of the ribs, (rising) obliquely above the middle of the sides of the *jaghana* (the hips) are the *pārśva sandhi* (the joints of the ribs). There, death by blocking of the blood. Straight on either side of the root of the breast, there are 2 *marmas* - the two great ones (*bṛhatyau*) of the midrib. (If this is injured), he will die by excessive bleeding and accompanied with complications. Above the seat, on either side of the mid-rib and attached to *trika* (the loins usually, but here, the triple i.e., the part between the shoulder blades), there is a *marma* called *amsa phalaka* (the scapula ?). Then (i.e., if this is injured)

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there (ensues) a benumbing of the arms and a wasting out of them. Between the shoulder-top and the neck and the tying together of the shoulder-blade and the shoulder, there is a marma called *amsa*. There, immobile armedness. Thus these 14 *marmas* of the dorsum are commented. Ss. sa. 6.26.

49. अत ऊर्ध्वं ऊर्ध्व जत्रुगतानि व्याख्यास्यामः -

तत्र कण्ठ नाडीमुभयतः चतस्रो धमन्यो द्वे नीले द्वे च मन्ये व्यत्यासेन, तत्र मूकता स्वर वैकृतमरसग्राहिता चः ग्रीवायामुभयतः चतस्रः सिरा मातृकाः, तत्र सद्यो मरणं; शिरो ग्रीवयोः सन्धाने कृकाटिके, तत्र चलमूर्धताः कर्ण पृष्ठतोऽधः संश्रिते विधुरे, तत्र बाधिर्यं; घ्राणमार्गमुभयतः स्रोतोमार्गप्रति बद्धे अभ्यन्तरतः फणे, तत्र गन्धाज्ञानं, भ्रूपुच्छान्तयोः अधोऽक्ष्णोः बाह्यतोऽपांगौ, तत्र आन्ध्यं दृष्टि-उपघातो वाः भ्रुवोरुपरि निम्नयोरावर्तौ नाम, तत्रापि आन्ध्यं, दृष्टि-उपघातो वा ।

भ्रुवोरन्तयोरुपरि कर्ण ललाटयोर्मध्ये शंखौ, तत्र सद्यो मरणं; शंखयोरुपरि केशान्त उत्क्षेपौ, तत्र सशल्यो जीवेत् पाकात् पतित शल्यो वा नोद्धृत शल्यः;

भ्रूवोर्मध्ये स्थपनी, तत्र उत्क्षेपवत्;

पंच सन्धयः शिरसि विभक्ताः सीमन्ता नाम, तत्र उन्माद भयचित्तनाशैः मरणं; घ्राण श्रोत्र अक्षिजिह्वासंतर्पणीनां सिराणां मध्ये सिरासन्निपातः शृंगाटकानि तानि चत्वारि मर्माणि, तत्रापि सद्योमरणं; मस्तकाभ्यन्त रोपरिष्टात् सिरा सन्निपातो रोमावर्तो अधिपतिः, तत्रापि सद्य एव।

एवम्,

एतानि सप्त त्रिंशूदर्ध्वजत्रुगतानि मर्माणि व्याख्यातानि।

Henceforth, we comment upon the *marmas* of the supraclavicle. Therein, on either side of the *kaṇṭhanāḍi* (trachea), there are four *dhamanis*. Two are *nīla*, two *manya*. By (any) alteration here, there will arise a dumbness, a change of voice and an incapacity to appreciate taste. On eitherside of the neck, there are four *siramāṭṛkas*. There (i.e., if this is injured, there will be) immediate death. In the place of joining between the head and the neck, there are two *kṛkāṭika* (the two thyroid cartileges of the larynx ?*). There, a shaking head. Below the base of the ear are situated the 2 *vidhuras*. (Does this refer to the tympanic bulla which appears quite prominent behind the ear and is unpaired, single or *vidhura*, on each side ?*). There, deafness. On either side of the nasal pathway, adherent to the channel or the passage underneath, there are the 2 *phaṇas*. There, the loss of sensation of smell. At the end of the tail of the eyebrow and on the outside of the eyes are the *apānga*. There, blindness or defective vision. Above the middle of the eyebrows, there are 2 *āvarta* in a shallow. There, blindness or defective vision. Above the end of the eyebrow and in the middle of the ear and the forehead are the two *śankhas* - (the temples). There, immediate death.

Above the temples and at the end of the hair line are the *utkṣēpa*. This, (when injured) if allowed to remain with the *śalya* (in tact) will (*permit the patient to*) live; or, of the *śalya* falls by maturation of the body tissue but not if it is just removed out (forcibly by the surgeon). In the middle of the eyebrow, there is *sthapani*; it is like the *utkṣepa*. There are five joints - these are clearly differentiated in the head; they are the border lines (*the description given fits well with the suture of the skull**). There, death due to madness, fear and loss of mind (*as the underlying brain gets damaged*). In the middle of the *siras* that irrigate (i.e., supply) nose, ear, eye and tonguer, there is a coming together of the *siras*: (this forms) the crossways or the *śṛngāṭakas*. They are the 4 *marmas*. There, immediate death. Within the pate (i.e., the crown of the head, above, there is (another) commingling (together) of the *siras* and the joints. This is (like the) whorls of the

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hair and is called the *adhipati* – the master.◎ There also, immediate death.
Thus these are the 37 supraclavicular *marmas*. Ss. sa. 6. 27.

(*dimensions of the marmas and their importance* :)

50. There are a few slokas here.
भवन्ति च अत्र श्लोकाः –
उर्व्यः शिरांसि विटपे च सकक्षपर्श्वे
एकैकमंगुलमितं स्तन पूर्वमूलम्।
विद्धि अंगुल द्व्यमितं मणिबन्ध गुल्फं
त्रीण्येव जानु सपरं सहकूर्पराभ्याम्।।
हृद्बस्ति कूर्चगुद नाभि वदन्ति मूर्ध्नि
चत्वारि पंच च गले दश यानि च द्वे।
तानि स्वपाणितल कुंचित संमितानि
शेषाण्यवेहि परिविस्तरतो अंगुलार्धम्।।

Urvis, kurca sira, vitapa, kakṣa (*dhara*), *parsva, stana purva mula* – these are of the dimensions of one inch. *Manibandha* and *gulpha* – these are of two inches each. The two *jānus* and *kurpara* are of three inches. *Hrdaya, basti, kurca, guda, nabhi* and the four *srngaṭakas* and the five *simantas* of the head, and the ten and two (i.e., the 2 *nila* , the 2 *manya* and the 8 *mātṛkas*) of the neck are of the dimensions of the closed palm of the hand of the person concerned. Ss. sa. 6.28, 29.

51. एतत् प्रमाणमभिवीक्ष्य वदन्ति तज्ज्ञाः
शस्त्रेण कर्मकरणं परिहृत्य कार्यम्।
पार्श्वाभिघातितमपीह निहन्ति मर्म
तस्माद्धि मर्मसदनम् परिवर्जनीयम्।।

The experts say that surgery should be carried out after carefully observing these dimensions and avoiding the *marmas* (accordingly). The marma will strike on even if injured at the sides of it. Therefore, the very abode of the *marmas* should be abandoned (while operation). Ss. Sa. 6.30.

52. छिन्नेषु पणि चरणेषु सिरा नराणां
संकोचमीयुः असृगल्पमतो निरेति।
प्राप्यामित व्यसनमुग्र मतो मनुष्याः
संच्छिन्न शाखतरुवन्निधनं न यान्ति।।
क्षिप्रेषु तत्र सतलेषु हतेषु रक्तं
गच्छत्यतीव पवनश्च रुजं करोति।
एवं विनाशमुपयान्ति हि तत्र विद्धा
वृक्षा इव आयुधनिपातनिकृत्तमूलाः।।
तस्मात् तयोरभिहतस्य तु पाणिपादं
छेत्तव्यमाशु मणिबन्धनगुल्फदेशे।

If the *siras* of a person's hands and feet are cut away, the *siras* get contracted.

◎ Does this refer to the brain and does the description 'the whorls of the hair' refer to the convolutions and gyrii on the cortical surface of it ?*

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And a small quantity of blood and fluid will get out. (But) even though he will become excessively and violently grieved, he will not die, just as the tree will not die if its branches are cut. If (*on the contrary, marmas like*) *ksipra* and *talahṛdaya* are injured, blood will flow excessively and *vāyu* will cause extreme pain. Injured there, he (i.e., the patient) will get destroyed like the trees struck at the root by a weapon. Therefore, in those who are injured there (i.e., in these *marmas*). their hands and feet should be cut immediately at the *maṇibandha* and *gulpha* region (*rather than allow the patient suffer further*). Ss. sa. 6.30 31-33

53. मर्माणि शल्यविषयार्धमुदाहरन्ति
यस्माच्च मर्मसु हता न भवन्ति सद्यः ।
जीवन्ति तत्र यदि वैद्यगुणेन केचित्
ते प्राप्नुवन्ति विकल्पत्वमसंशयं हि ।।
संभिन्न जर्जरित कोष्ठशिरः कपाला
जीवन्ति शस्त्रनिहतैश्च शरीरदेशैः ।
छिन्नैश्च सक्थिभुजपादकरैर शेषैः
येषां न मर्मसु कृता विविधाः प्रहाराः ।।

(ii. *clinical importance* :) *Marmas* illustrate half the contents of surgery. For, he who is struck at the *marmas*, if he does not die immediately and if he lives by the qualities (and the proficiency) of the physician who has attended upon him, he will surely get some debility or the other. Even if the *kostha* or regions of the body like the head and the *kapāla* are broken and injured by means of weapons, or, the leg, the shoulder, the feet or the hand is totally removed, even he, will live if his *marmas* are not injured in the various ways (we have commented above). Ss. sa. 6.33-35.

54. सोममारुत तेजांसि रजः सत्वतमांसि च। मर्मसु प्रायशः पुंसां भूतात्मा च अवतिष्ठते।। मर्मसु आभिहताः तस्मान्न जीवन्ति शरीरिणः ।

Soma, *maruta* and *tejas*; *raja*, *satwa* and *tamas* and the *bhūtātma* - all of these probably stay (together) naturally in the *marmas* of the person. That is why he who is struck at the *marmas* will not probably live. Ss. sa. 6.35.

55. इन्द्रियार्थेषु असंप्राप्तिर्मनो बुद्धि विपर्ययः । रुजश्च विविधास्तीव्रा भवन्त्याशु हरे हते ।।
हते कालान्तरघ्ने तु ध्रुवं धातुक्षयो नराणां । ततो धातुक्षयात् जन्तुः वेदानाभिश्च नश्यति ।।
हते वैकल्यजनने केवलं वैद्यनैपुण्यात् । शरीरं क्रियया युक्तं विकल्पत्वमवाप्नुयात् ।।
विशल्यघ्ने तु विज्ञेयं पूर्वोक्तं यच्च कारणम् । रुजाकराणि मर्माणि क्षतानि विविधा रुजः ।।
कुर्वन्त्यन्ते च वैकल्यं कुवैद्यवशगो यदि ।

Non-functioning of the sensors, distortion of the mind and intellect and various types of acute pain - these will occur in those that are stuck by the immediately fatal (injury of the *marmas*). Steady wasting of the *dhātus*, occurs in those that are stuck by the belatedly fatal. Following this wasting away, he (the patient) will die accompanied with various pains. In those that are hit by (an injury at) the debilitating (*marmas*) but are living still by the skill of the physician, (their) body will have (an amount of) activity (alright) but is sure to develop some distortion (or the other, in due course). If the *marmas* that cause pain are struck with (further injury) and the patient resorts to a bad physician, this will (surely) result in a (permanent) debility finally. Ss. sa. 6. 36-40.

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छेद्द भेदाभिघातेभ्यो दहनात् दारणादपि। उपघातं विजानीयात् मर्मणां तुल्य लक्षणम्।।
मर्माभिघातास्तु न कश्चिदस्ति योऽल्पात्ययो निरत्ययो वा।।
प्रायेण मर्मस्वभिताडितास्तु वैकल्य मृच्छत्यवा म्रियन्ते।।
मर्माण्यधिष्ठाय ये विकारा मूर्छन्ति काये विविधा नराणां।।
प्रायेण ते कृच्छ्रतमा भवन्ति नरस्य यत्नैरपि साध्यमानाः।।

Even when there is a cutting, a breaking, an injury, a burning or a splitting near the *marmas,* corresponding characteristics (of ill effects) will (surely) arise there. There is nothing like little trouble or no trouble when *marmas* are struck. Most probably those that are hit at the *marmas* become debilitated or they will die. And whatever are the deformations that affect the body with *marmas* as their base, they all probably become hard to cure, even if all efforts are taken up. Ss. sa. 6. 42, 43.

g. *internal anatomy* (*from Caraka*)

(The quotations selected here are all from Caraka and indicate the following : (1) Caraka had well understood the existence of circulation of many substances in the living body and the need for the structural channels for the purpose; (2) The important role that he assigns for the latter in the body economy is well seen in the remark that " some consider the body as being nothing but the channels therein, so all pervasive they are ". This is astonishingly modern; see for instance, the role assigned to the all pervading endoplasmic reticulum in the ultrastructure of a cell ; (3) What Caraka states in his Samhita is but a portion of the knowledge existing then ; for there are frequent references of other authorities, though it is not clear if all of these latter had written specific works; quite often, there is a clear statement that what he has given in a specific context is but a few selected details, the rest is omitted as being too elaborate; (see for instance the fourth quotation below) ((4). It is understandable that he had actually seen the major channels though many of the minute ones are more logical though justifiable surmises as he himself admits. (5) The concept that the so many details seen in the construction of the body - all serve a specific purpose in the eternally dynamic body economy, was well appreciated).

56. यावन्तः पुरुषे मूर्तिमन्तो भावविशेषास्तावन्त एवाग्मिन् स्रोतसां प्रकारविशेषाः। सर्वे भावाः पुरुषेनान्तरेण स्रोतांस्यभिनिवर्तन्ते, क्षयं वाऽप्यभिगच्छन्ति। स्रोतांसि खलु परिणाममापद्यमानानां धातूनामभिवाहीनि भवन्ति अयनार्थेन।। अपि चैके स्रोतसामेव समुदयं पुरुषमिच्छन्ति, सर्वगतत्वात्, सर्व सरत्वात् च दोष प्रकोपण प्रशमनानाम्। न त्वेतदेवं, यस्य हि स्रोतांसि, यच्च वहन्ति, यच्च आवहन्ति, यत्र च अवस्थितानि, सर्वं तदन्यत्तेभ्यः।। अतिबहुत्वात् खलु केचिदपरिसंख्येयानि आचक्षते स्रोतांसि, परिसंख्येयानि पुनरन्ये।।
तेषां तु खलु स्रोतसां यथास्थूलं, कतिचित् प्रकारान् मूलतश्च प्रकोपविज्ञानतश्च अनुव्याख्याग्यामः;
ये भविष्यन्ति अलं अनुक्तार्थं ज्ञानाय ज्ञानवतां,
विज्ञानाय च अज्ञानवताम्।

As many corporeal specialities of substances are there in the human body, so many indeed are the varieties in the types of the channels (for them). All such corporate substances in the body in fact do not get produced if there are no channels (for the purpose) or even get diminished (i.e. both their production and disappearance require a communicative space in the form of the channels). Indeed the channels become the transporting conductors for the elements as they are getting transformed (during the activities of the body).

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There are in fact some (authorities) who would like to consider that the human person is but an assemblage of the channels, since the latter are pervasive everywhere and they (themselves) again serve as communicators in the whole of the body for (both) the aggravating and the alleviating of the vitiations (besides the normal activities); this is not so. To what they are the channels, what do they transport, what do they bring in and where are they situated - all of these is something different from these (channels themselves) (*i.e., the channels and the body within which they ramify ought to be considered as two distinct entities, in spite of the excessive inter-ramification between the two*).

Because of their very prolific nature, some consider that the channels are uncountable. But others presume them to be (clearly countable) (though many).

It is of these (countable) channels that we shall comment, upon some types grossly and from their very roots now - and some in terms of the specialities of (their serving as medium for) aggravation of the vitiations. This will serve as adequate to the knowledgeable, to know what has not been expressed here and also as an enlightened knowledge to the ignorant. Ca. vi. 5. 3-6.

तद्यथा-प्राणोदकान्न रसरुधिरमांसमेदास्थिमज्जशुक्र मूत्र पुरीष स्वेद वहानीति वातपित्त श्लेष्मणां पुनः सर्व शरीरचराणां सर्वाणि स्रोतांस्ययन भूतानि, तद्वदनीन्द्रियाणां पुनः सत्वादीनां केवलं चेतनावत् शरीरमयन भूतं अधिष्ठान भूतं च।

तदेतत् स्रोतसां प्रकृतिभूतत्वान्न विकारैः उपसृज्यते शरीरम्।।

This is as follows : the conducting channels for life-breaths, water, nutritional juice, blood, flesh, fat, bone-forming element, marrow, semen, urine, faeces and sweat. As far as the (three vitiations :) *vāta, pitta,* and *kapha* that move every-where in the body, all the channels act as their medium of transport. Similarly, for the supersensory mind and the like, the whole of the animate body acts as the medium of transport as well as the place of residence (*a clear statement that sensitivity pervades the whole of the living body*).

Now, this body will not be touched by any disease, if these channels are in their natural state (i.e. they are not blocked or occluded in any way). Cs. vi. 5.6.

तत्र प्राणवहानां स्रोतसां हृदयं मूलं महास्रोतश्च, प्रदुष्टानां तु खलु एषां इदं विशेष विज्ञानं भवतिः तद्यथा-अतिसृष्टं अतिबद्धं कुपितं अल्पाल्पं अभीक्ष्णं वा सशब्द शूलं उच्छ्वासन्तं दृष्ट्वा प्राण वहानि अस्य स्रोतांसि प्रदुष्टानीति विद्यात्।

(Among the prominent channels), the region enclosing the heart and the great (alimentary) channel are the zone of the channels carrying life breaths; when these are vitiated, the characteristic symptoms are as follows : for instance, if by seeing a patient who respires in too prolonged a manner, restrictedly, agitatedly, too feebly (shallow or short) or stertorously and painfully one should conclude that the respiratory channels are defiled.

उदकवहानां स्रोतसां तालुमूलं क्लोम च, प्रदुष्टानांतु खलु एषां इदं विशेष विज्ञानं भवतिः तद्यथा- जिह्वा तालु ओष्ठ कण्ठ क्लोम शोषं पिपासां च अति प्रवृद्धां दृष्ट्वा उदकवहानि अस्य स्रोतांसि प्रदुष्ठानीति विद्यात्।

Of the channels carrying the aqueous element, the zone is the region (extending

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from) palate to *kloman* (lungs ?). When morbid, they elicit the following symptoms. Thus, by seeing that the tongue, the palate, the lips, the throat and *kloma* are dry or that the thirst is too much aggravating, one should conclude that it is the channels of waters that are defiled in this (patient).

अन्न वहानां स्रोतसां आमाशयो मूलं वामं च पार्श्वं, प्रदुष्टानां तु खलु एषां इदं विशेष विज्ञानं भवतिः तद्यथा - अनन्नाभिलषणम् अरोचकाविपाकौ छर्दिं च दृष्ट्वा अन्न वहानि अस्य स्रोतांसि प्रदुष्टानीति विद्यात्।

Of the channels carrying the food, the zone is the region of the stomach and the left side. When morbid, they elicit the following symptoms: by seeing (in the patient) a desire not to eat food, anorexia and non-assimialtion and vomiting, one should know that it is his channels of food that are defiled.

रस वहानां स्रोतसां हृदयं मूलं दश च धमन्यः। शोणितवहानां स्रोतसां यकृन्मूलं प्लीहा च। मांस वहानां च स्रोतसां स्नायुर्मूलं त्वक् च। मेदोवहानां स्रोतसां वृक्कौ मूलं वसावहनं च। अस्थिवहानां स्रोतसां मेदो मूलं जघनं च। मज्जावहानां स्रोतसामस्थीनि मूलं सन्धयश्च। शुक्रवहानां स्रोतसां वृषणौ मूलं शेफश्च प्रदुष्टानां तु खलु एषां रसादिवह स्रोतसां विज्ञानायुक्तानि विविध अशितपीतीये ; यान्येव धातूनी प्रदोष विज्ञानानि तान्येव यथास्वं प्रदुष्टानां धातु स्रोतसाम्।

मूत्र वहानां स्रोतसां बस्तिर्मूलं वंक्षणौ च। प्रदुष्टानां तु खलु एषामिदं विशेष विज्ञानं भवतिः तद्यथा - अतिसृष्टमतिबद्धं प्रकुपितमल्पाल्पमभीक्ष्णं वा बहलं सशूलं मूत्रयन्तं दृष्ट्वा मूत्रवहान्यस्य स्रोतांसि प्रदुष्टानि इति विद्यात्।

Of the channels that carry the nutrient body-fluids, the zone is the heart and the ten arteries. The zone for the channels carrying the blood is liver and spleen. The zone for the channels carrying flesh (forming) elements is the tendons and the skin. The zone for the channels carrying fat (forming) elements are the two kiddeys and the *vasāvahana,* the carriers of the greasy (elements). The zone for the channels of bone forming elements is the adipose tissue and the buttocks. The zone for the channels for the marrow forming elements is the bones and the joints. For the channels for the semen, the zone is the testes and the phallus. The sciences of the channels carrying the nutrient body fluid, when defiled and vitiated have been spoken about in our sections on the various kinds of drinks and foods. Whatever are the sciences of the vitiation of the body-elements, they themselves hold good to the vitiated channels in accordance with the respective body elements concerned. For the channels carrying the urine, the zone is the bladder and the two groins: the special science for them when they get defiled is as follows : observing (a patient who passes urine) too prolongedly, obsterpatedly, provokedly, constantly dribbling, too frequently, profusely or painfully, one should know that his urinary channels are defiled.

पुरीषवहानां स्रोतसां पक्काशयो मूलं स्थूल गुदं च, प्रदुष्टानां तु खलु एषामिदं विशेष विज्ञानं भवतिः तद्यथा-कृच्छ्रेण अल्पाल्पं सशब्दशूलं अतिद्रवं अतिग्रथितं अतिबहुं च उपविशन्तं दृष्ट्वा पुरीषवहान्यस्य स्रोतांसि प्रदुष्टानीति विद्यात्।

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For the channels carrying the faecal matter, the colon and the rectum comprise the zone; if they are vitiated this is the special science : observing a patient passing scarce stools with difficulty, or stools accompanied with sound and pain, or stools accompanied with sound and pain, or stools that are very watery, very sticky (scybalous) or very profuse, one should conclude that his faecal channels are defiled.

स्वेदवहानां स्रोतसां मेदो मूलं लोमकूपाश्च, प्रदुष्टानां तु खलु एषां इदं विशेषविज्ञानं भवतिः तद्यथा-अस्वेदनमतिस्वेदनं पारुष्यमतिश्लक्ष्णताभंगस्य परिदाहं लोम हर्षं च दृष्ट्वा स्वेदवहानि अस्य स्रोतांसि प्रदुष्टानीति विद्यात्।

For the channels carrying sweat, the hair follicles and the adipose tissue comprise the zone, if they are vitiated this is the special science : observing a patient who does not sweat at all (anhydrosis), or sweats too much (hyper-hydrosis), or his body is too rough or excessively smooth, or there is a sense of general burning or a horripilation one should conclude that his sudatory channels are defiled. Cs. vi. 5. 3-8.

(*technical names of the channels*) स्रोतांसि, सिराः, धमन्यः, रसायन्यः, रसवाहिन्यः, नाड्यः, पन्थानः, मार्गाः, शरीरच्छिद्राणि, संवृतासंवृतानि, स्थानानि, आशयाः, निकेताश्चेति शरीरधात्ववकाशानां लक्ष्यालक्ष्याणां नामानि भवन्ति।

1. channels, 2 veins, 3 arteries, 4 conductors of nutrient body fluids - the larger one (ducts), 5 conductors of nutrient body fluids - the smaller ones (capillaries), 6 tubes, 7 passages, 8 tracks, 9 lacunae, 10 the closed and the unsclosed i.e. open (spaces) (glands, closed and open), 11 places, 12 repertories, 13 resorts - these are the names of the spaces on the body constitution, visible and invisible. 9 (1) Cs. vi. 5.9

आहारश्च विहारश्च यः स्यात् दोषगुणैः समः। धातुभिर्विगुणश्चापि स्रोतसांस प्रदूषकः।।
अतिप्रवृत्तिः संगो वा सिराणां ग्रन्थयोऽपि वा। विमार्ग गमनं चापि स्रोतसां दुष्टि लक्षणम्।।

That type of food and behaviour which is similar to the morbidity that it provokes and contrary to the body constituent concerned - it is this that vitiates a channel.

Excessive indulgence or complete stoppage, or , knot formation in the minute channels, or a back-ward or a deviant passage of the substance transported - these constitute the characteristics of the morbidity in a channel Cs. vi 5 23-24.

स्वधातु समवर्णानि वृत्तस्थूलान्यणूनि चा स्रोतांसि दीर्घाण्याकृत्या प्रतानसदृशानि च।
त्रयोदशानां मूलानि स्रोतसां दुष्टि लक्षणम्।
सामान्यं नामपर्यायाः कोपनानि परस्परम्।।
दोषहेतुः पृथकत्वेन भेषजोद्देश एव च।
स्रोतोविमाने निदिष्टस्तथा चादौ विनश्चियः।

The channels have the same colour as that of the body (forming) element they transport, they are circular (in cross section ?), either large or minute, and in shape they are elongated and like creepers (i.e. spreading in all directions).

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(The scope of the discussion on the channels on the internal anatomy of the body).

The (operative) zones (mentioning the beginning and the end in most cases) of the thirteen (prominent) channels (in the body), the characteristic symptoms of their vitiations, their normal characteristics, their several technical names, the mutual provocations of the body channels and the body elements, the cause of vitiation in each and every case separately as also the line of treatment and in the beginning, the truth concerning man as being but a conglomeration of channels - (all of this) is laid down in this (chapter) entitled Specific Determination of the measure of the systems of circulation. Cs. vi. 6.20-30.

केवलं विदितं यस्य शरीरं सर्वभावतः । शरीराः सर्व रोगाश्च स कर्मसु न मुह्यति ।।

He who understands the body as a whole in all its aspect and all the disorders of the body is never confused in his (clinical) work Cs. vi. 6.31.

internal anatomy a few finer details

57. शरीरसंख्याम् अवयवशः कृत्स्नं शरीरं प्रविभाज्य सर्व शरीरसंख्यान प्रमाण हेतोः भगवन्तं आत्रेयं अग्निवेशः पप्रच्छ ।

Dividing the entirety of the body into its (several) component members and in order to understand their enumeration in the whole of the body as well as their (specific) proportions and measures, Agnivesa enquired the revered Atreya. Cs. sa. 7.3

(The reply of Atreya specifies the number of the skin (layers), the organs, the sensors, the heart, the fifteen visceral organs, the nine orifices of the body - all of these as visible and then onwards, the non-clearly indicatables and therefore the purely inferrables; the tendons, the veins, the nerves (22, *dhamanis*), the vulnerables, the joints, the hairs; the total quality of the liquids in the body, such as the waters, the blood, the bile, etc; classifies the entities as coming under the category of the five primordial elements of the earth, the water, etc. and of the soul. Then concludes:)

शरीरावयवस्तु परमाणुभेदेन अपरिसंख्येया भवन्ति,
अति बहुत्वादति सौक्ष्म्यादतीन्द्रियत्वाच्च ।
तेषां संयोगविभागे परमाणूनां कारणं वायुः कर्मस्वभावश्च ।।

The component members of the body in terms of the molecules, are uncountable, because of their extreme multitude, extreme minuteness and because they are beyond our sense of perception. In combination and division of these molecules, the reasons are the element of dynamism (vayu), the various activities involved and the (very) nature of the entities (concerned). Cs. sa. 7.17 - (below-visibility level of structures).

पंच सन्धयः शिरसि विभक्ताः सीमन्ता नाम तत्रोन्मादभय चित्तनाशैर्मरणम् ।

Five joints are differentiated in the skull (lit. head) called the sutures. By insanity, fear and loss of thinking there (i.e. arising at these points ?), there will ensue death. Ss. sa. 6.77

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कपाले सन्धयः पंच सीमन्तास्तिर्यगूर्ध्वगाः ।
भ्रमोन्माद मनोनाशैस्तेषु विद्धेषु नश्यति।।

(There are) five joints in the skull, the sutures, going oblique as well as upwards. If one is pierced at these (points), one gets destroyed by means of bewilderment, insanity and the loss of mind (that would ensure) Ahr. sa. 4.35.

(Of these last three quotations, the first refers to a molecular basis of phipiological activities as ancient ayurvedists would have it: while the next two clearly refers to the brain and possibly its gyrii and more improtantly to brain as the seat of mind and therefor the site of insanity as well).

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9. Life, Sense, Soul, Mind

(These four apparently disconnected entities have one thing in common - the element of *knowing* and do represent a single evolutive series starting from life and ending in mind. It is necessary to define them clearly in the science of Biology and Medicine, as they are key factors for both. The chapter commences with a quotation in English from Dr. S. Radhakrishnan, summarising the traditional Indian viewpoint in the light of the modern thinking)

a. *life*

(*the conceptual basis* :)

1. *Jīva* is literally, that which breaths, from *jiv* to breathe. It referred originally to the biological aspect of man's nature which goes on throughout life, in waking, dream and sleep. It is called *puruṣa* in the sense of *purī śaya* or that which dwells in the citadel of the heart. This means that the biological serves the ends of another, the soul or psyche. It is this soul which reaps the fruits of deeds and survives the death of the physicial body. It is the *bhoktṛ*, the enjoyer, *kartṛ*, the doer. It is the *vignāna maya ātma* . The *jīva* consists of a material body, the principle of breath (*prāṇa*), regulating the unconscious activities of the individual and the principle of the conscious activities (*manas*), which uses the five sensory organs (*indriyas*) of sight, hearing, touch, smell and taste and the five organs of action viz., speech , hands, feet, excretory and generative organs. All these are organised by *vijnana* or *buddhi*. The basis of the individuality of the ego is *vijnāna* or intelligence, which draws around itself, mind, life and body. The ego belongs to the relative world, is a stream of experience, a fluent mass of life, a centre round which our experience of sense and mind gather. At the back of this whole structure is the Universal Consciousness, *ātman* which is our true being.

The human individual is a complex of five elements, *anna, praṇa, manas, vijnana* and *ānanda* . The Highest Spirit which is the ground of all being, with which man's whole being should get united at the end of his journey, does not contribute to his self sense. Life and matter are organised into the gross physical body, *sthūla śarīra,* mind and life into the subtle body, *sukṣma śarīra* , intelligence into the causal body *karaṇa sarira* and Atman, the Universal Self is the supreme being, sustaining others. The ego is the manifestation of the Universal Self using memory and moral being which are changing formations. *Puruṣa* is sometimes used for the Atman which is higher than *buddhi*. *Buddhi* belongs to the objective hierarchy of being. *Puruṣa* is the subjective light of consciousness that is reflected in all beings.

The natural sciences, physics and chemistry, anatomy and physiology, psychiatry and sociology treat man as an object of inquiry. They show that man is a link in the chain of living beings, one among many. He has a body and mind which belong to him but his self is not derived from any of these, though it is at the root of them all. All empirical casualties and biological processes of development apply to his outer being, but not to his self. The physical, the biological, the psychological

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and the logical aspects are aspects of his nature, his *kośas* as the Taithiriya *upaniṣad* calls them. There are great possibilities of empirical investigation, but man is more than what he knows about himself. SR. U. 91-92.

2. तस्य य आत्मानम् अविस्तरम् वेद अश्नुते ह आविर्भूयः ...ओषधिवनस्पतिषु हि रसो दृश्यन्ते चित्तं प्राणभृत्सु, प्राण भृत्सु त्वेव आविस्तारं आत्मा तेषु हि रसोऽपि दृश्यते न चित्तं इतरेषु... सहिप्रज्ञानेन संपन्नतामो विज्ञातं वदति, विज्ञातं पश्यति, वेद स्वस्तानं वेद प्ठोकालोकौ मर्त्येन अमृतं ईप्सति, एवं संपन्नः, अथेतरेषां पशूनामसना पिप्यसे एव अधिविज्ञानं...स एष पुरुषः समुद्रः सर्वं लोकं अत्ति। यद्वा किंच अश्नुते अत्येनं मन्यते।

He who knows more and more clearly the self obtains fuller being. In plants and trees sap only is seen, in animals consciousness. The self is more and more clear in man for he is most endowed with intelligence. He knows tomorrow, he knows the world and what is not the world. By the mortal, he desires the immortal, being thus endowed. As for animals, hunger and thirst comprise their knowledge. But this man is the sea, he is above all the world. Whatever her reaches, he desires to go beyond it' (S.R.) Aitareya Aranyaka II.1.3 Also in the message of the Upanishads (adopted from A. Berriedole Keith's translation). Swami Ranganathananda.

3. अमृतं चैव मृत्युश्च द्व्यं देहे प्रतिष्टितं। मृत्युरापद्यते मोहात् सत्येन आपद्यते अमृतम्।।

"In each human body the two principles of immortality and death are established. By the pursuit of delusion we reach death; by the pursuit of truth we attain immortality" - Mahabharata (SR. U. 94).

4. शरीर इन्द्रिय सत्व आत्म संयोगो धारि जीवितम्। नित्यगश्च अनुबन्धश्च पर्य्यायः आयुरुच्यते।।

(*a definition* :) What holds (together) the combination of the body, the sensors, the mind and the self is the life; this is (also) called alternatively, as 'what is always on the move' (*nityaga* transient), an accompaniment (of this combination, - an *anubandha* ; 'death' being the dissociation of this combine) and the span of life, *āyu* (what always goes, *eti-gacchati*). (Ayurveda-the science of Medicine - is the knowledge, the science of this transitory entity - how to hold it well and long).

5. सत्वं आत्मा शरीरं च त्रयमेतत् त्रिदण्डवत्। लोकस्तिष्ठति संयोगात् तत्र सर्वं प्रतिष्ठितम्।।

Mind, soul and body - these three are like the three pillars. The world (of life) rests on a combination of them and everything (else) rests thereupon. Cs. su. 1.46.

6. खादीनि आत्मा मनः कालो दिशश्च द्रव्य संग्रहः। सेन्द्रियं चेतनं द्रव्यं निरिन्द्रियं अचेतनम्।।

The (whole gamut of the) collection of the materials that go to make up this living body are : the five primordial elements beginning from air onwards (air - space, earth - the solid matter, water - the liquid matter, *vayu* - the gaseous matter and fire - the energy), the soul, the mind, the time-span (during which the living being concerned exists) and the space (the area where the being exists). These are of two categories : the animated viz., that which has the sensory organs (i.e., the living beings) and the unanimated, viz, that which has no sensory organs (i.e., the primordial elements). Cs. su. 1.48

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7. दशैव आयतनान्याहुः प्राणा येषु प्रतिष्ठिताः । शंखौ मर्मत्रयं कण्ठो रक्तं शुक्रौजसी गुदम् ।।

(*The abodes of life (in the body)* These are ten in numbers : the two temples, the heart, the bladder, the head, the throat, the blood, the semen, the elan of life or *ojas* and the rectum; when these are struck down, the very life gets struck down (-viz., *these are the vulnerble spots, the marmas*) Cs. su. 29.1-3.

b. *sense, mind, consciousness*

8. इह खलु पंचेन्द्रियाणि, पंचेन्द्रियद्रव्याणि, पंचेन्द्रियाधिष्टानानि, पंचेन्द्रियार्थाः, पंचेन्द्रिय बुद्धयो भवन्ति, इत्युक्त मिन्द्रियाधिकारे। अतीन्द्रियं पुनर्मनः सत्व संज्ञकं चेत इत्याहुरेके, तदर्थात्मसंपत्तदायत्त चेष्टं चेष्टा प्रत्यय भूतमिन्द्रियाणाम् ।

b *sense*
(i) (*sensory function* :)

Now there are five sense faculties, five sense materials, five sense organs, five sense objects and five sense perceptions. The mind however is superior to these senses. Some call it, *the* consciousness or *the* animation (*cetah*). Its activity is regulated by the excellence (or otherwise) of its objects (on the one hand) and the (motivating) self (on the other). It is the cause of the activity of the sense organs. Cs. su. 8.3,4

9. स्वार्थेन्द्रियार्थसंकल्प व्यभिचरणात् च अनेकमेकस्मिन् पुरुषे सत्वं, रजस्तम सत्व गुणयोगात् चः न च अनेकत्वं, न ह्येकं ह्येककालमनेकेषु प्रवर्ततेः तस्मात् नैककाला सर्वेन्द्रिय प्रवृत्तिः ।

It is only because of the ever changing multipicity of the mental objects, the sense objects, and the conceptualisations as well as its combination with the qualities of attachment (*rajas*), dullness (*tamas*) and the innate essence or the equipoise (*satva*) that the mind appears to be many in a single person; there is *no* multiplicity (of minds like this). (For,) a single mind will not engage itself in more than one sense objects, simultaneously. Therefore, there is no functioning of all the sense organs at one and the same moment. Cs. su. 8.5

10. यद्गुणं चाभीक्ष्णं पुरुषमनुवर्तते सत्वं तत्सत्वमेव उपदिशन्ति मुनयो बाहुल्यानुशयात् ।

Whatever quality that accompanies a person and his mental make up again and again (i.e. most frequently), he is said to be of that mentality by the wise on account of his predominant association with it. Cs. su. 8.6

11. मनः पुरः सराणि इन्द्रियाणि अर्थग्रहण समर्थानि भवन्ति

The sense organs become capable of cognising the meaning of their sense objects (only) when they are led by the mind (and not, other wise). Cs. su. 8.7.

12. तत्र चक्षुः श्रोत्रंघ्राणं रसनं स्पर्शनमिति पंचेन्द्रियाणि। पंचेन्द्रिय द्रव्याणि-खंवायुर्ज्योतिरापो भूरिति। पंचेन्द्रियधिष्ठानानि-अक्षिणी कर्णौ नासिके जिह्वा त्वक् चेति। पंचेन्द्रियार्थाः - शब्द स्पर्शरुप रस गन्धाः। पंचेन्द्रिय बुद्धयः - चक्षुर्बुद्ध्यादिकाः, ता पुनरिन्द्रियेन्द्रियार्थ सत्वात्म सन्निकर्षजाः, क्षणिकाः निश्चयात्मिकाश्च।

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Sight, hearing, smell, taste and touch are the five sense faculties. Sky (ether), air, light, water and earth are the five sense materials. The five sense objects are sound, touch, shape, taste and smell. The five sense perceptions are the perception by sight and so on (i.e. hearing etc.). These perceptions arise when the senses, the sense-objects, the mind and the self are in contact with one another. They are all momentary but clear and definitive (for that moment). Cs. su. 8.12

स्वार्थेन्द्रियार्थ संकल्प व्यभिचरणाच्चानेकमेकस्मिन् पुरुषे सत्वं, रजः तम सत्वगुण योगात् च। न चानेकत्वं, न ह्येकं ह्येककालमनेकेषु प्रवर्ततेः तस्मात् नैककाला सर्वेन्द्रिय प्रवृत्तिः।

It is only because of the diverse conceptual activities and the deviations thereof as per the various individual sense and according to the significance of the sense concerned as well as due to the commingling (in all this) with (*the factors*) of the *satva, raja* and *tama,* that the mind situated in a single person appears as if it is manifold. This is not true; there is no manifoldness for the mind in a person. It is single and one. Moreover, this single mind will not proceed in more than one (objective) at a single time.

That is why indulgence in all the senses at the same time does not arise- (*principle of the activities of the mind*). CS. su. 8.5.

13. मनो मनोऽर्थो बुद्धिरात्मा चेति अध्यात्म द्रव्य गुण संग्रहः शुभाशुभप्रवृत्ति निवृत्ति हेतुश्च, द्रव्याश्रितं च कर्म, यदुच्यते क्रिया इति।

The mind, the mental objects, the intellect and the self - this is the gamut of collection of the qualities of the materials concerning the self. The activity (of the self) is : (serving as) the cause of engaging or disengaging itself in good or bad activities and this activity is dependent on the materials (specified above). (It is this activity) that is also called the therapeusis (viz., an activity that can be employed for medical i.e. curative purpose). Cs. su. 8.13.

14. चक्षुः पश्यति रुपाणि मनसा न च चक्षुषा। मनसि व्याकुले चक्षुः पश्यन्नपि न पश्यति।।
यथेन्द्रियाणि सर्वाणि पश्यन्तीति अभिचक्षते। न चेन्द्रियाणि पश्यन्ति मन एवात्र पश्यति।।

(*mental functioning* :) It is the eye that sees the (diverse) forms and does so through the mind and not by the eye (itself). If the mind is agitated the eye will not see even if it is seeing. When they say that it is the sense organs that perceive, it is not that the sense organs perceive, but it is the mind alone that perceives here. Ma. Bh. Santiparva.

यथा गच्छति शैलूषो रुपाण्येकस्तथैव हि। मनो नामान्यनेकानि धत्ते कर्मान्तरं व्रजत्।।

Just as an actor in a drama assumes many a guise but remains single in himself, similarly, the mind takes up different names in accordance with the diversity of its acts. Yogavasiatha

इन्द्रियेण इन्द्रियार्थो हि समनस्केन गृह्यते। कल्प्यते मनसा तु ऊर्ध्वं गुणतो दोषतोऽथवा।।
जायते विषये तत्र या बुद्धिर्निश्चयात्मिका। व्यवस्यति तथा वक्तुं कर्तुं वा बुद्धि पूर्वकम्।।

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The object of the senses is grasped by the sense organ acting in conjunction with the mind. The conceptualisation commences then onwards by means of the mind and dependent on good or bad qualities (in the situation concerned). Then arises therein, what is called a determinative intellection. (The person) then takes effort to act or speak in accordance with this and in close conjunction with the intellectual concept (of what he is doing). Sa. 1.

यदिन्द्रियमाश्रित्य जन्तोर्बुद्धिः प्रवर्तते। याति सा तेन निर्देशं मनसा च मनोभवा।

What intellectual conception commences depending on which particular sense organ- the mind goes along with it, by its guidance. The birth of mind (itself) is *then*. Caraka

(*sense* :) संज्ञां नाम ग्रहणेन

(The existence and the efficacy of) sense (in a person) is to be examined by the capacity of his grasping the name (of the objects presented to him). Cs. vi. 4.8

15. वृक्षगुल्मं बहुविधं तत्रैव तृणजातयः। तमसाऽधर्मरुपेण च्छादिताः कर्महेतुना।। अन्तः संज्ञा भवन्ति एते सुख दुःख समन्विताः।

(*plant life - sensation*) The many varieties of trees and bushes and so also the diverse kinds of grasses - these are beclouded in terms of the reasons for their activity by *tamas* and non-*dharma*. (But,) these (do) have a sense of internal perception and are endowed with (a feeling of) happiness and unhappiness. Cs. su. 1.20

16. मनो मनोऽर्थो बुद्धि रात्मा चेत्यध्यात्म द्रव्य गुण संग्रहः शुभाशुभ प्रवृति निवृत्ति हेतुश्च, द्रव्याश्रितं च कर्म, यदुच्यते क्रियेति।

(mental functioning and senses :) i) The totality of the collection of the materials concerning the self are : mind, the object of the mind, the intellect and the self. It is this collection again that is responsible for engagement and disengagement (of the person) in what is auspicious or inauspicious to oneself. All activities are dependent on a materiality: these (latter dependences) are themselves called the actions. Cs. su. 8.13.

तत्र अनुमानगम्यानां पंच महाभूतविकार समुदायात्मकानामपि सतामिन्द्रियाणां तेजश्चक्षुसि, खं श्रोत्रे, घ्राणे क्षितिः, आपो रसने, स्पर्शनेऽनिलो विशेषेण उपपद्यतेः तत्र यद्यदात्मकमिन्द्रियं विशेषात् तत्तदात्मकमेव अर्थमनुगृह्णति, तत्स्वभावात् विभुत्वात् च।

The whole gamut of these variations of the five great elementals (that make up the universe) is to be understood by inference alone, through the sense. Still its tejas (energy) appears in the eye, sky in the ear, earth in the smell, water in the tongue, wind in the touch, specially. Therein, of whatever special nature is the particular sense, it grasps that respective sense alone, because it is its nature to do so and it is the master in doing so. Cs. su. 8.14.

17. तदर्थातियोगायोगमिथ्यायोगात् समनस्कमिन्द्रियं विकृतिमापद्यमानं यथास्वं बुद्धिडपघाताय संपद्यते, समयोगात् पुनः प्रकृतिमापद्यमानं यथास्वं बुद्धिमाप्याययति।

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(ii) (*clinical overtones* :) These senses whenever they attain an aberration along with the organs concerned and the mind due to excessive, non or wrong commingling (among themselves), they become responsible for the infliction of the intellect accordingly. By equable commingling, they again regain their original nature and bring back the intellect as well, to the respective original nature (in every case of aberration). Cs. su. 8.15

18. मनसस्तु चिन्त्यमर्थः। तत्र मनसो मनो बुद्धेश्च त एव समानातिहीनमिथ्या योगाः प्रकृति विकृति हेतवो भवन्ति।

The meaning of mind is thinking. Therein, the mind and thinking can also similarly have an equable, excessive, deficient or wrong commingling and these (latter) become responsible for the nature and the denaturing thereof, respectively. Cs. su. 8.16.

19. तस्मादात्महितं चिकीर्षता सर्वेण सर्वं सर्वदा स्मृतिमास्थाय सद् वृत्तमनुष्ठेयम्।

Therefore all who desire their own welfare should keep a sense of rectitude in all that they do and always; and, should practice good conduct.

20. तद्धिअनुतिष्ठन् युगपत् संपादयति अर्थद्वयं आरोग्यं इन्द्रिय विजयं चेति।

By engaging oneself in such a good conduct, one will immediately secure two benefits : health and conquest of the senses. Cs. Su. 8.17.18

(iii) *consciousness*

21. "Intuitive consciousness is called *pratibhā* or *arṣajnana* or *para samvit* and has the characteristics of immediacy and clarity. It is independent of perception and inference. It is synoptic not analytic, noetic not discursive. It is inarticulate and cannot be readily translated into conceptual terms, though it can become articulate. The two types of knowledge are not incompatible but distinguishable. The seers are those who have seen, heard and handled the word of life. While divine wisdom is eternal and is always possessed by God, intuitive consciousness is brought into existence by a mental process. Visvanatha in Bhaṣa pariccheda describes yogic intuition as two fold, that of *yukti yogin* who mirrors the eternal light in which the totality of things remains perpetually illumined and that of *yuñjāna-yogin*, who requires the aid of reflection and contemplation for the understanding of eternal wisdom. When mind by gradual training is freed from the influences of the concepts and memory images of the past (*vikalpas*) it merges itself in the object (*dhyeya*) and is absorbed and pervaded by it. The nature of the object is then fully revealed. When we develop yogic intuition we have direct knowledge of objects, past and future. I have called it intuition or integral insight. It is different from sense-observation, mathematical and logical reasoning. It comes in a flash as distinct from patient observation, or, logical analysis. We cannot presee it or consciously prepare for it. It is creativity. It reveals the central feature of the intuited object. The subject and the object in intuition tend to coalesce. We thus gain an unmediated immediate knowledge and not the mediated, inadequate and always uncertain cognition or idea, derived from the sense perception or logical reasoning. It deals with the reality and not with the appearance of the object. It lies

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at the basis of sense and logical knowledge. The Ego disappears. The individual becomes the instrument of the universal lifted above the limitations of the ego. This is the supra-rational divine magnus of Plato. It is what Rousseau calls 'sovereign intelligence which sees in a twinkle of an eye the truth of all things, in contrast to vain knowledge'. Reason and all other forms of awareness depend on it. Gauss struggling with a Mathematical problem reported : 'I succeeded not on account of my painful effort but by the grace of God'. Like a sudden flash of lightning, the riddle happened to be solved. I myself cannot say what was the conducting thread which conneted what I previously knew with what made my success possible". SR. Br. 106-107.

c. *soul*

22. *wisdom of the soul, ātma viveka* : "The individual soul is knowledge by nature, knower, an enjoyer and an active agent. It is atomic in size. We have an infinite number of souls. The qualities of the soul are not natural and are due to limiting adjuncts, *upādhis* . They last only so long as the limiting adjuncts last. The qualities of the soul are not natural, for, then the soul would always continue in *samsāra* on account of action and enjoyment. The soul is an agent when it has body, sense organs, etc., when these disappear the soul is no longer an agent. The atomicity of the soul is also *aupādhika* or adventitious for Brahman is all pervading by nature and the soul is non-different from Brahman.

(जीव परयोश्च स्वाभाविकः अभेदः औपाधिकस्तु भेदः; स तन् निवृत्तौ निवर्तते।)

The soul's knowledge and its quality as knower are not *aupādhika* for Brahman himself is knowledge and knower. The individual soul is different and non-different from Brahman, during the state of *samsāra* . It is non-different from Brahman in the state of release. The non-difference of the soul from Brahman is natural, *svābhāvika* , real and lasting, the difference from Brahman is *aupādhika* , real but not lasting.....The *upādhi* or the limiting adjunct cannot make the individual soul absolutely different from Brahman even as the spark is not absolutely different from the fire or the ether in the jar is not absolutely different from the universal ether, or as the waves are not absolutely different from the ocean...During the state of mundane existence the individual soul as a part and an effect of Brahman is non-different from Brahman; at the same time it is different from Brahman because of the *upādhi* or the limiting adjunct which separates it from Brahman. *Upādhis* are not false or illusory. The *upādhis* are beginningless : they are *buddhi*, the internal organ and their qualities, attachment based on self-sense. So long as the individual soul is under the influence of *avidyā* and regards itself as absolutely different from Brahman, it acts in a selfish spirit, identifying itself with the *upadhis*, body, senses, internal organ, *buddhi*. So long as this relation to *upādhis* exist, the agency of the soul, is real.

Brahman is not something to be produced, *utpādya*, but something to be obtained *āpya*. When the *upādhis* are removed, the soul becomes one with Brahman, omniscient, omnipotent, and all pervading. Liberation is not a state of pure consciousness but of bliss also, for a state of pure consciousness is not much different from a state of pure unconsciousness. Liberation is not the result of removal of *āvidya* ; it is the attainment of something new. The individual soul

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becomes absolutely identical with Brahman. It is omniscient, omnipotent and one with all souls like God himself". SR. Bs. 42. 44.

23. निर्विकारः परस्तु आत्मा सत्वभूतगुणेन्द्रियैः । चैतन्ये कारणं नित्यो द्रष्टा पश्यति हि क्रिया ।।

(*a definition* :) Soul is changeless, great and subtle and is the cause of life when coupled with the mind, the five primordial elements, the qualities thereof and the sense organs. It is the cause of animation and is eternal and (merely) sees (as a witness) the (innumerable) activities (of life but does not take part in them, directly). Cs. su. 1.56.

24. आत्मा ज्ञः करणैः योगात् ज्ञानं तु अस्य प्रवर्तते । करणानां अवैमल्यात् अयोगात् वा न वर्तते ।।

Soul is the knower. Knowledge will commence for it because of the conjoining with the instrumentalities (viz, the five senses and the mind). (If however) there is a non-clarity or non-conjoining of the instrumentalities there will not be this knowledge. Cs. sa. 1.

25. पुरुषस्यानुपहत रेतसः स्त्रियाश्चाप्रदुष्ट योनि शोणितगर्भाशयया यदा भवति संसर्गः ऋतुकाले, यदा चानयोस्तथायुक्ते संसर्गे शुक्र शोणित संसर्गमन्तर्गर्भाशयगतं जीवोऽवक्रामति ।

(*life and soul* :) When there occurs a cohabitation of a man, his semen unafflicted (lit. not struck down) (in any way), with a woman at the time of mensus, whose genitalia, oestrum and womb are non-blemished, and when there occurs an intrauterine coming together of the semen and the oestrum of these two of such an endowment, then does life descend (lit. step down) (there) Cs. sa. 3.3

आत्मजश्च अयंगर्भः । गर्भात्मा ह्यन्तरात्मा यः, तं 'जीव' इत्याचक्षते शाश्वतमरुजमजरममरमक्षयमभेद्यं अच्छेद्यमलोड्यं विश्वरुपं विश्वकर्माणं अव्यक्तमनादिमनिघनं अक्षरमपि ।

The foetus is born of the soul (of the person, concerned). The soul of the foetus is the inner soul, which is being called as "life". (This soul) is eternal, non-diseased, or free from pain, non-decaying, immortal, non-declining, indivisible, uncuttable, un-agitateable, omnipresent and also the universal creator, the invisible, without the beginning or the end and the uncorrodible. Ca. sa. 3.8

यानि तु खल्वस्य गर्भस्यात्मजानि, यानि च अस्यात्मतः संभवतः संभवन्ति, तानि अनुव्याख्यास्यामः, तद्यथा-तासु तासु योनिषु उत्पत्तिरायुरात्मज्ञानं मन इन्द्रियाणि प्राणापानौ प्रेरणं धारणं आकृति स्वरवर्णविशेषाः सुखं दुःखे इच्छाद्वेषौ चेतना धृतिर्बुद्धिः स्मृतिरहंकारः प्रयत्नश्चेति (आत्मजानि) ।।

What indeed are born of the soul of this foetus, what come about by the happenings from out of the soul of this (foetus) - we shall comment upon them in order. They are : the taking of birth in those particular wombs, the (specific) span of life (with which the birth occurs), the knowledge of the self, mind, the sense organs, the *prāṇa* (the life-force) and the *apāna* (outward exit of the *vāyu*), the inducement (to activity), the retentivity, the (specific) particularities of shape, voice and complexion, happiness and unhappiness, desire and hatred, animation, fortitude, intellect, memory, egoism and exertion (these are born of the soul of the person). Cs. sa. 3. 10.

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रुपम् दृश्यम् लोचनम् दृक् तद् दृश्यम् दृक् तु मानसम्।
दृश्या धीवृत्तयः साक्षी दृगेव न तु दृश्यते।

"The form is perceived and the eye is its perceiver. It (the eye) is perceived and the mind is its perceiver. The mind with its modifications is perceived and the witness is verily the perceiver. But the witness is not porceived (by any other). Whatever is cognised is not-self. The body is not self, for, it is knowable like a jar. देहो नात्मा दृश्यत्वात् घटवत् Whatever is not-self is an appearance like shell-silver. ब्रह्मभिन्नं सर्वं मिथ्या ब्रह्मभिन्नत्वात् शुक्ति रजतवत्। Drg-drsya-viveka I vedanta-paribhasa II (Sr. Bs. 32)

d. *mind*
i. *nature, materiality*

26. सूक्ष्म शरीरान्तर्वर्ति भवति मनः पदार्थः।

Mind is a substance that exists within the body in a subtle form. Sankaracarya Tattva bodha.

27. खादीनि आत्मा मनः कालोदिशश्च द्रव्य संग्रहः।
भूतपंचकवत् मनः पदार्थो द्रव्यत्वेन परिगण्यते।
कस्मात्, गुणवत् क्रियावत् द्रव्यत्वात्।।

The five primordial elements beginning from the sky onwards (viz. water, air, fire and space) the self, the mind the time and the direction - these are the collection of the *materials* (that go to make up a living man).

The substance of the mind is evaluated as being material like these (very same) five primordial elements (of sky etc.). Why? Because of (its) qualities, activities and the materiality (in all of which, it resembles any other physical entity). Cs.

28. अतीन्द्रियं मनः।

Mind is what lies beyond the sensory organs. Cs. su. 8.4

29. अणुत्वं अथ च एकत्वं द्वौगुणौ मनसः स्मृतौ।

Minuteness and singleness - these two are considered to be the two qualities of the mind. Cs.

तच्च कारणं मनोरुपं यद्यात्मवत् युगपत् सर्वेन्द्रिय व्यापकं स्वीक्रियते किंवा अनेक संख्यम् इन्द्रियवत् स्वीक्रियते,...
न च भवति युगपत् ज्ञानानि, तस्मात् युगपत् ज्ञानानुदयाल्लिंगान् मनो अणुरुपमेकं च सिद्ध्यतीत्याह - अणुत्वमित्यादि।।

The reason for this (considering of mind as being subtle and single) is whether it is of the nature of the mind to accept a similutaneous pervading of all the sense organs, as the soul does or to accept a multitudinous number as do the (five) sense organs. There will not occur a simultaneous understanding (of all the senses

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together) - (at the level of the mind) and, therefore and since there is no arising up, of simultaneous understanding by the mind - the (fact that) mind is of the nature of being subtle and minute (and not all pervasive) gets proven. Cakrapani tika. Cs. sa. 1.19

30. अव्यक्तादीनि चतुर्विंशति तत्वानि सर्व एष अचेतन वर्गः ।
मन एतत् तत्वमपि एषु चतुर्विंशति तत्वेषु अन्तर्भवति,
यतः पुरुषो नाम आत्मा एव चेतनावान् भवति ।

The twenty four principles from the unmanifest onwards - all of these constitute the category of the inanimate. The principle of what is called mind is included within these twenty four principles themselves - wherefrom along (however), the soul called as the person, becomes animate. Ss. 1.8

31. वायुः (प्रेरकः) एव मनसो नियन्ता प्रणेता च ।

The *vayu* (the principle of nervous activity) alone is the controller and the leader and the guide of the mind. Ca. 7. 12. 8

32. मनः प्राणस्य रसः । विज्ञानं मनसो रसः । विज्ञानस्य रसः आनन्दः ।

Mind is the essence of life. Knowledge is the essence of mind. Delight is the esssence of knowledge. Maitrayaniya upanisad 6.

अतीन्द्रियं पुनर्मनः सत्व संज्ञकं चेत इत्याहुरेके, तदर्थात्म संपत् तदायत्त चेष्टं चेष्टा प्रत्यय भूतमिन्द्रियाणाम् ।

And the mind is beyond the sense organs and considered by some as the essence designatory or the very animation (of an individual). Excellence of the self is the object of that (mind). What is considered as the ascertainment of the activity of the sense organs is under the control of that. Cs. su. 8.4.

Here, by 'that' is meant the mind. Its object is the object of the mind. This is (the experiencing of) happiness and the like, thinking, deliberations and the like. Self is the rearranger of animation. Excellence of these two together (viz., mind and the self) is the excellence of the self.

The activity of the mind is the understanding of happiness and the like as well as the thinkable objects, the process of thinking, and the inducement of the eyes and the like (to do their work). The activity of the individual sense organs of eyes and the like is characterised by the gaining of knowledge of their own respective sense objects like the form and so on. Herein by ascertainment, is that it is the reason underlying the mind. Ca. 1 Ga.

(ii) *mind and heart*

33. ब्रह्मन् जगति भूतानाम् हृदयं तत्किमुच्यते । इदं सर्वं महादर्शे यस्मिन् तत् प्रतिबिम्बति ।।
साधो जगति भूतानाम् हृदयं द्विविधं स्मृतम् । उपादेयं च हेयं विभागोऽयं तयोः श्रृणु ।।
इयत्तया परिच्छिन्ने देहे यत् वक्षसोंतरम् । हेयं तत् हृदयं विद्धि तनौ एकतटे स्थितम् ।।
संविन्मात्रं तु हृदयमुपादेयं स्थितं स्मृतम् । तत् प्रधानं हृदयं तत्रेदं समवस्थितम् ।।
सर्वेषामेव जंतूनां संवित् हृदयमुच्यते ।

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"Brahman, what is it that is called heart of the living beings in this world ?, wherein is reflected all this that exists, as in a great mirror ?" (Rama asked Vasistha. Vasistha replied:)"O gentle one, the heart of the living beings in this world are considered to be of two kinds : that which is admissible as heart and that which is despisable, as heart. Listen to the differences between the two. What is clearly demarcatable, as its limits can be specified as (being) so and so and nothing more and what stays within the chest of the body, know *that* as the despisable heart (and this) stays just in one corner within the body. The admissible heart however stays solely serving for (the purpose of) cognition. This is the major heart. This is situated within it equably, this is what is called the cognising heart in all the living beings." Yogavāsiṣṭha.

(Considering heart as the seat of mind, specially in the latter's functionings for feeling and to some extent, knowing - particularly without the typical deliberations of reason, but intuitively, as it were - is a very ancient tradition. Here, however, a clear distinction is sought to be made between the knowing 'heart' as opposed to the strictly localised heart - as corresponding to modern concepts - the former referring to the mind, and the latter to the heart).

iii *functioning of the mind*

34. मन आत्मना इन्द्रियैश्च सह संयुक्तं ज्ञानकारणमस्ति। तद्यथा-आत्मा मनसा संयुज्यते मन इन्द्रियेण इन्द्रियमर्थेन इति।

Mind when associated with the self and the sense organs constitutes the cause of the (securement of) knowledge. This is as follows : Self gets associated with the mind, mind with the sense organs, and the sense organs with the objects of the senses. Cakra. Cs. su. 8.12.

लक्षणं मनसो ज्ञानस्याभावो भाव एव च। सति हि आत्मेन्द्रियार्थानां सन्निकर्षे न वर्तते। वैवृत्यान्मनसो ज्ञानं सान्निध्यात् तच्च वर्तते।

The characteristic of mind (is) the absence or the presence of knowledge. But this will not come about by a proximity of (*only*) self, senses and the objects of the senses. If there is a turning away of the mind (*the fourth factor, involved*), there is the absence of the knowledge; if this (mind) stays there (unreverted), there occurs knowledge, then. Cs. sa. 1. 18.

35. चिन्त्यं विचार्यमूह्यं च ध्येयं संकल्प्यमेव च।
यत्किंचिन्मनसो ज्ञेयं तत् सर्वं हि अर्थसंज्ञकम्।।

The thinkable, the guessable, the contemplatable, the conceiveable and the resolvable - these constitute the objects of the mind. Whatever it is that can be known by the mind, the whole of it is designated as the object of the mind. Cs. sa. 1. 20.

36. आत्मा मनसा युज्यते, मन इन्द्रियेण, इन्द्रियमर्थेन।

Soul gets (functionally) united (lit. yolked) with the mind, mind with the sense organs and the sense organs with the objects of the senses. Vatsyayana-bhasya. Nyaya 1. 14

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37. आत्मेन्द्रियमनोऽर्थानाम् सन्निकर्षात् प्रवर्तते।
व्यक्ता तदात्वे या बुद्धिः प्रत्यक्षं स निगद्यते।।

The meanings of the soul, the sense-organs, the mind and the objects (of the senses) proceed from the close association or proximity (among them). The intellectual comprehension which then arises is spoken of as direct perception. Cs. su. 11. 20.

38. आत्मेन्द्रियमनोऽर्थानामेकैका सन्निकर्षजा।।
अंगुल्यंगुष्ठतलजः तन्त्रीवीणा नखोद्भवः।
इष्ट शब्दो यथा बुद्धिर्दृष्टा संयोगजा तथा।।

The meanings of every one of (the steps in cognition, such as) the soul, the sense organs, the mind and the objects (of the senses) arise by their mutual proximity. Just as there is the origin of the desired sound by (the association of) the surface of the little finger and the thumb (on the one hand) and the string, the *veena* and the nail (on the other), the seeing by means of intellect is similarly a product of (close) association (of the several elements concerned), Cs. sa. 1. 33, 34.

39. मनः कर्माह...इन्द्रियाभिग्रहः इन्द्रियाधिष्ठानं मनसः कर्म, तथ स्वस्य निग्रहो मनसः कर्म, मनो ह्यनिष्ट विषय प्रसृतं मनसैव नियम्यते, 'मनश्च गुणान्तर युक्तं सद्विषयान्तरान्नियमयति' इत्याहुरेके। यदुक्तम्- 'विपय प्रवणं वित्तं घृतिभ्रंशान्न शकयते।' नियन्तुमहितादर्शात् घृतिर्हि नियमात्मिका।...

मनः कर्मान्तरमाह-ऊहो विचारश्चेति। अत्रोह आलोचन (ना) ज्ञानं निर्विकल्प (क) म्, विचारो हेयोपादेयतया विकल्पनम्।...

चतुर्विधं हि विकल्प कारणं सांख्या मन्यन्तेः
तत्र बाह्यमिन्द्रिय रुपम्, आभ्यनतरं तु मनोऽहंकारो बुद्धि श्चेति त्रितयम्।
तत्र इन्द्रियाणि आलोचयन्ति निर्विकल्पेन गृह्णन्तीत्यर्थः;
मनस्तु संकल्पयति हेयोपादेयतया कल्पयतीत्यर्थः;
बुद्धिरध्यवस्यति त्यजाम्येनं दोषवन्तं उपददाम्येनं गुणवन्तं इत्यध्यवसायं करोतीत्यर्थः।
ऊहस्तु यद्यपि बाह्यचक्षुरादि कर्म, तथापि तत्रापि मनोऽधिष्ठानमस्ति इति मनः कर्मतया उक्तः।
वचनं हि 'सान्तः कारणा बुद्धिः सर्वं विषयमवगाहते यस्मात्।
तस्मात् त्रिविधं करणं द्वारि द्वाराणि शेषाणि।।' (सांख्यकारिका ३५) इति।

The activities of the mind are told... The grasping by means of the mind is that action of the mind as it carries out by presiding over the senses. Similarly (however), controlling of itself is the work of the mind (alone). Mind controls the spreading towards undersirable objectives by mind itself. Some opine that mind controls that which is of the other viz. undesirable qualities by that which is of good qualities. It is also said that "if there is a deviation in fortitude, it is not possible to control the mind from its proclivity after the sense objects, for it is the nature of fortitude to control."...The various activities of the mind are (thus) spoken about : guessing and deliberation. Here, guessing is thinking and knowing without (positing

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any alternatives. The sankhya philsophers regard four types of reasons for the alternatives. Therein, what is external, is of the form ot the sense (concerned); what is internal however is of the triad (nature), such as mind, egoism and intellect. This means that here, the sense organs think about and grasp (the meaning of an entity, as such), without (positing any) alternatives, (*this is just sensory perception - the first step of mental processing here, where the psyche of the individual has not yet come to play*). 'Mind however conceptualises' - (this) means (*that in this next step*, it) conceives in terms of the despicable and the acceptable. Egoism presumes 'that this is mine and here is my authority' - it means that here the mind thinks thus. Intellect operates means that it behaves here 'as I am discarding this as being vitiated and take this up as being of good quality'. As regards, guess, even though it is the activity of the external eyes and the like, even then, even here, there does exist the suzerainity of the mind and that is why, this is also spoken about as being a mental act. There is a statement also "Intellect is (always) accompanied with (the activities of the) internal instrumentalities and the understanding of an object proceeds thereby. Therefore there is a three-fold instrumentality (of compreshension), *at* the door (step of the sense organs), - the doors (themselves) and all the remaining" (Sankhya Karika 35). Cakrapani ṭīka Śarīra. 1. 21.

iv) *mention of nerves*:

40. संज्ञावहेषु स्रोतः सु दोष व्याप्तेषु मानवः। रजस्तम परीतेषु मूढो भ्रान्तेन चेतसा।।
विक्षिपन् हस्तपादं च विजिह्मभ्रूविलोचनः। दन्तान् खादन् वमन् फेनं विवृताक्षः पतेत क्षितौ।
अल्पकालान्तरं चापि पुनः संज्ञां लभेत सः। सोऽपस्मार इति प्रोक्तः
संज्ञावहेषु स्रोतस्विति कथं बहुवचनं, यतो धमनी व्याकरणे 'द्वाभ्यां प्रबुध्यते' इत्यनेन द्वे एव संज्ञावहे स्रोतसी उक्ते ? सत्यं, द्व्योरपि स्रोतसोः सूक्ष्माणां प्रतानानां बहुत्वात् स्रोतः सु इत्युक्तम्।।

A person who is pervaded with vitiation in his conducting channels for cognition and overpowered (and becoming) unconscious with *rajas* and *tamas* because of confusion in the mind, falls down on the ground with his eyes bulging out and throwing about his hands and legs and contorting his eyebrows and eyes, biting his teeth and vomiting out froth; he regains consciousness a little time after - He is called an epilept. Ss. u. 61: 8-10.

Why a *plural* of conducting channels ?; in the chapter on the analysis of the *dhamanis* (*an incidental proof to state that there were some ancient authorities who considered dhamanis as standing for nerves and not arteries*) (there is a statement that man) cognises by means of two (*dhamanis*) and, that is why only two conducting channels for cognition are stated. This is true, because of the multitude of the finer branches of these two channels only. Da. Ss. u. 61. 8-10.

41. मनोवहानां पूर्णत्वात् दोषैरतिबलै स्त्रिभिः। स्रोतसां दारुणान् स्वप्नान् काले पश्यति दारुणे।

At terrible times (for e.g. at death), because of the fullness (of occupation) of the channels conducting mind by means of the three very powerful vitiations, (the

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person) sees terrible dreams. Cs. in. 5.41

मनोवह मार्गः, मनोवहानि स्रोतांसि यद्यपि पृथक्त्वेन नोक्तानि तथाऽपि मनसः 'केवलं चेतनावत् शरीरमयन भूतं' इत्यभिधानात् सर्व शरीर स्रोतांसि गुह्यन्ते, विशेषेण तु हृदयाश्रितत्वान्मनसस्तदाश्रिता दश धमन्यो मनोवहाः अभिधीयन्ते।

The passage conducting mind. Though the channels conducting mind are not stated separately, even then, since it is stated that the whole of the animated body is the tract of the mind, it is the channels (concerned) of the whole of the body that are taken to be reported (here). Specially however, since mind is sheltered in the heart (i.e. the centre of feeling), the ten channels arising from the heart are considered as being mind (viz, sensation and volition) conducting. Cakara. Cs. in. 5.41.

v) *the role of mind*

42. सहस्रांकुर शाखाग्र फल पल्लव शालिनः।
अस्य संसार वृक्षस्य मनोमूल्य् इति स्थितम्।।

This is how it stands : the source and the root of this tree of the world endowed with its thousands of sprouts, branches, endpoints, fruits and blossoms - is the mind (of the observer). Yoga vasistha.

43. चित्ते चलति संसारो निश्चले मोक्ष उच्यते।

If the thinking mind starts moving, there is the (commencement of the) mundane existence of the world. If it stops, unmoving, that is : liberation. Yoga vasistha.

44. मन एव मनुष्याणां कारणं बन्धमोक्षयोः।

Mind alone is the cause of bondage and liberation of the people. Yogavasista.

45. अन्यत्र मनो अभूवं नादर्शमन्यत्र मनो अभूवं नाश्रोषमिति।
मनसा ह्येष पश्यति मनसा श्रृणोंति इत्येतत् प्रमाणम्।।

(*the role of mind in sensory physiology*) If the mind is else where, there is no seeing. If the mind is elsewhere, there is no hearing. It is through the mind that a person sees, through the mind that he hears - this is the proof here. Brhadaranyaka.

46. 'इन्द्रियनिरपेक्षं' मनो यद् गृह्णाति तत् चिन्त्यम्।

What the mind grasps without the (direct?) assistance of the sense organs (and therefore, by its own volition ?) - that is (what is considered as) - the thinkable, (and, the thought or the act of thinking ?). Cakrapani tika. Ca. sa. 1.20.

मनसो ज्ञेयमिति इन्द्रिय निरपेक्ष मनो ग्राह्यम्।

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To be understood by the mind means the graspability of the mind without (the direct ?) assistance of the sense organs. Cakrapani tika. Ca. sa. 1.20.

47. समनसा ध्यायेद्- यद् वा अहं किंचन मनसा। ध्यास्यामि तथैव तद्भविष्यति। तद्ध स्म तथैव भवति।

One should contemplate deeply (on anything he desires). Whatever it is that I contemplate deeply in my mind, it will come about exactly in the same way. Actually, that will come about exactly in the same way. Gopatha Brahmana. 119.

श्रद्धामयोऽयं पुरुषः यो यत् श्रद्धः स एव सः।

Man is what he intensely believes and has his faith in. Whatever is his faith, he is only that.

48. इच्छाद्वेष प्रयत्न सुख दुःख ज्ञानानि आत्मनो लिंगमिति।

Desire, hatred, effort, and the (conscious) knowledge of happiness and grief - these are considered to be the sign of the soul. Nyaya. 11.1. 10

49. प्राणापान निमेषोन्मेष मनोगति इन्द्रियान्तर विकाराः सुखदुःखेच्छाद्वेष प्रयत्नाश्च आत्मनो लिंगानि इति।

Breathing in (*prāṇa*), sending the flatus out (*apāna*), closing the eyelids and opening of the eyelids and the dynamics of the mind - are the internal alterations due to the sense organs. Happiness, grief, desire, hatred and effort are the signs of the soul. Vaisesika darsana. 3. 24.

50. मनोबुद्धिरहंकारश्चित्तं करणमान्तरम्। संशयो निश्चयो गर्वः स्मरणं विषया इमे।

Mind, intellect, egoism and active thinking - these constitute the internal instrumentalities (of a person). (Getting a) doubt, (coming to a) determinative conclusion, (assuming an attitude of) egotism, recollection and memory - these constitute the objects (of these internal instrumentalities). Vedanta bhasya.

51. कामः संकल्पो विचिकित्सा श्रद्धा धृतिः अधृतिः ह्रीः धीः भीः इत्येतात् सर्वं मन एव।

"Desire, fancy, doubt, faith, want of faith, steadiness, restlessness, shame, understanding, fear-all these are aspects of mind." (Kane 1478) Br. up. I. 5.3.

52. मनो विषयमाह- चिन्त्यमित्यादि।
चिन्त्यं कर्तव्यतया अकर्तव्यतया वा यन्मनसा चिन्त्यते।
विचार्यम् उपपत्ति अनुपपत्तिभ्यां यत् विमृश्यते।
ऊह्यमं च यत् सम्भावनया ऊह्यते 'एवम् एतद् भविष्यति' इति।
ध्येयं भावना ज्ञान विषयम्।
संकल्प्यं गुणवत्तया दोषवत्तया वा अवधारणा विषयम्।

Therein, what is being thought about by the mind as what ought to be done and what is not to be done - this is the thinkable (component). What is being

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scrutinised on the basis of the evidences available and evidences not available - this is the deliberatable (component). "This will come about only in this way" - what is guessed thus by probability - is the guessable (component). The contemplatable (component) is the subject of the knowledge of feeling. An understanding of a subject in terms of its good qualities and blemishes is the conceptualisable (component). This is the nature of the musings of the mind. Cakra Cs. sa. 1.20.

53. इन्द्रियाभिग्रहः कर्म मनसः स्वस्य निग्रहः। ऊहो विचारश्च।

The functions of the mind are : grasping of the meaning of the senses, controlling of itself, guessing and active deliberation. Cs. sa. 1.21.

54. मनोऽर्थाव्यभिचरणेन।

Mind (viz., its normalcy) is to be examined by the non-deviance in the meaning (that it makes out in any specific situation). Cs. vi.. 4.8.

vi) *Mind and the sense organs*

55. अतीन्द्रियं पुनर्मनः सत्व संज्ञकं चेत इत्याहुरेके तदर्थात्म संपत् तदायत्त चेष्टं चेष्टाप्रत्यय भूतं इन्द्रियाणाम्।

The mind again is beyond the senses. This is the real essence, and some consider it as the (real) animator. One's wealth is according to what it dictates, ones activities are all what it rules and it is this that is the motivating cause of (all) the senses. Cs. su. 8.4.

56. चक्षुः पश्यति रुपाणि मनसा न च चक्षुषा। मनसि व्याकुले चक्षुः पश्यन्नपि न पश्यति।।
यथेन्द्रियाणि सर्वाणि पश्यन्तीति अभिचक्षते। न च इन्द्रियाणि पश्यन्ति मन एव अत्र पश्यति।

The eye sees the forms through the mind and not the eye. If the mind is distressed and occupied, the eye will not see, even though it is looking. They say that it is all the senses that see (hear, smell and so on). (Actually however) it is not the sense organs that see here but the mind alone. Shanti parva.

57. स्वार्थेन्द्रियार्थ संकल्प व्यभिचरणात् च अनेकमेकस्मिन् पुरुषे सत्वं रजस्तम सत्व गुण योगात् च, न च अनेकत्वं न ह्येकंहि एक काल मनेकेषु प्रवर्ततेः तस्मात् नैक काला सर्वेन्द्रिय प्रवृत्तिः।

Because of the deviations due to its own varied functions (of thinking, guessing, etc.), the meanings of the (several) senses, and the (diverse) conceptions and so also due to its coupling with the three different qualities of *satva, rajas* and *tamas*, the mind may appear to be many in a single person. But there is no such multiplicity. It does not engage itself in many things simultaneously. Therefore there is no tendency (to grasp the meaning) of all the senses simultaneously. Cs. su. 8.5.

58. मनः पुरः सराणि इन्द्रियाणि अर्थग्रहण समर्थानि भवन्ति। तत्र चक्षुः श्रोत्रं, घ्राणं रसनं स्पर्शनमिति पंचेन्द्रियाणि।

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Senses become capable of grasping (their respective meanings) with mind going in front. Therein eye, ear, nose, tongue and touch - these are the five senses. Ca. su. 8. 7-8

59. तदर्थ अतियोग अयोग मिथ्यायोगात् समनस्कं इन्द्रियं विकृतिमापद्यमानं यथास्वं बुद्ध्युपघाताय समपद्यते, समयोगात् पुनः प्रकृतिमापद्यमानं यथास्वं बुद्धिमाप्याययति।

As the sense along with the mind gets distorted by over indulging, non indulging or false indulging in its respective meanings, this (itself) becomes responsible for striking down the intellect accordingly; again as it gets (back) it own natural indulgence (i.e. neither over, nor false, etc.), this (itself) delights the mind as befitting its specific nature. Cs. su. 8.15.

60. मनस्तु चिन्त्यमर्थः। तत्र मनसो मनो बुद्रेश्च त एव समानातियोग मिथ्यायोगाः प्रकृतिविकृति हेतवो भवन्ति।

Mind is what it thinks. Therein, mind and its intellect - these alone become the reasons for the natural and the distorted state by their balanced, excessive, very defective and false engagement. Ca. su. 8.16.

61. आत्मा बुद्ध्या समेत्य अर्थान् मनो युंक्ते विवक्षया।
मनः कायाग्नि माहन्ति स प्रेरयति मारुतम्।।
मारुतः तु उरसि चरन् मन्द्रं जनयति स्वरम्।

(First,) the soul grasps the meaning (of the objects), (working) in association with the intellect (and then) employs the mind with a desire to speak. (Then does the) mind strike i.e. induce the motivating energy of the body (lit. the fire of the body) and this stimulates the neuromuscular dynamics (i.e. the *vāyu*). The *vāyu* moving about in the chest slowly creates the deep voice (of the speech). Panini.

62. इन्द्रियेण इन्द्रियार्थो हि समनस्केन गृह्यते।
कल्प्यते मनसा तु ऊर्ध्वं गुणतो दोषतोऽथवा।।
जायते विषये तत्र या बुद्धिः निश्चयात्मिका। व्यवस्यति तथावक्तुं कर्तुंवा बुद्धिपूर्वकम्।।

The meaning of the senses is grasped by the (respective) sense organs working in close association with the mind. From then onwards, this is conceptualised further by means of the mind and in accordance with its good qualities or bad blemishes. What can be called as determinative and definitive intellect will then arise in the objective (under question). Then does the person engage himself to speak about or performing a (definite) act intentionally.

vii) *mind and body*:

63. अस्मिन् शास्त्रे
पंच महाभूत शरीरि समवायः पुरुष इति उच्यते।
तस्मिन् क्रिया, सोऽधिष्ठानं।

In the science of ayurveda (we are concerned with), (i.e., there occurs) a coinherence of the five *mahābhūtas* (on the one hand) and the *śarīri* or the

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indweller in this body made up of the *mahābhūtas* (on the other). It is this coinherence (or, the sum total of the five *mahābhūtas* plus the *śarīri*) that is called the *puruṣa* or, the human person (viz., the individual human being). Everything done in this science, is done on him and he is the (sole) receptable of all the activities of the physician. Ss. su. 1.22.

(To designate that inexplicable something that dwells in the human body and makes all the difference when it is alive or dead. (that something which has plagued thinkers ever since its first recognition in its more familiar form of Mind versus Body or Vitalism versus Materialism), Susruta uses the simple and straight forward term *śarīri*. This is just the indweller and not, the familiar vedantic term *ātman* which he could have very well employed. It is likely that he has done so advisedly, the term *ātman* in this sense of soul never occurring anywhere in his vast text. It is not that he is against vedic *darśana* but as a thoroughly rational person he would like to simply state that in a living person there is something special, the indweller which is itself however not *pancabhautic* (as it is probably not manageable that way) though the body in which it dwells is wholly *pancabhautic*. And more importantly, the relation between these two viz., the non-*pancabhautic sariri* and the clearly *pancabhautic śarīra* (whose etymological meaning is : that which disintegrates or decays, *sirnati*) is one of *samavāya*, coinherence, and not *samyoga* or combination. Compare the interestingly parallel modern statement by a neurophysiologist and a philosopher.* Here the Self is considered as a mere witness (a saksi) and a separate entity other than the mind. In fact, it is this Self which used the mind the brain and the body as its organs, very much as ayurvedists would like to assert).

viii) *faculties of mind*
(*memory-definitions; the triggers and the value*:)

64. अनुभव जन्य ज्ञानं स्मृतिः ।

The knowledge born out of experience is memory. Yoga sutra.

अनुभूतविषया संप्रमोषः ।

Letting loose of the objects experienced is memory.

स्मृतिःभूतार्थ विज्ञानम् ।

Memory is the special knowledge of the meanings of the past. Ss. u 61.3

स्मृति शास्त्रजं ज्ञानम् ।

Knowledge is born of memory and technical treatises. Cs. vi 4.4.

स्मृतिः सत्सेवनाद्यैश्च घृत्यन्तरै रुपजायते। स्मृत्वा स्वभावं भावान्। स्मरन् दुःखात् प्रमुच्यते।

(Good and salutary) memory comes into being by service to the good and at the end of resoluteness. By remembering the (true) nature (of what one meets with) and recollecting the phenomena (in their proper perspective), one gets released from grief.

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* Popper K.r. and J.C. Eccles. The Self and Its Brain. Springs International, 1977

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अचेतनं क्रियावच्च मनः चेतियिता परः। युक्तस्य मनसा तस्य निर्दिश्यते विभोः क्रियाः।।
चेतनावान् यत श्चात्मा ततः कर्ता निरुच्यते। अचेतनत्वाच्च मनः क्रियावदपि नोच्यते।।

Mind is insensible but causes the soul to be busy and active. The soul which is the lord, when coupled with mind directs the activity of it. Since it is the soul that is the animate and the sensient entity, it is this soul that gets called as the doer (though it does so, only through the mind); while the mind itself though it is engaged as it were in action, is considered a non-doer, since by itself it is insensible. Cs. sa. 1. 75-76.

The eight reasons by which (such a) memory comes into being are being told (now).

वक्ष्यन्ते कारणान्यष्टौ स्मृतिर्यै रुपजायते।
निमित्त रुपग्रहणात् सादृश्यात् सविपर्ययात्।।
सत्वानुबन्धादभ्यासात् ज्ञान योगात् पुनः श्रुतात्।
दृष्ट श्रुतानु भूतानां स्मरणात् स्मृति रुच्यते।।

It is the (noting) of an imminent reason (e.g. getting reminded of a pot by seeing a potter), the grasping of a (similarity in) form (e.g. remembering a cow after seeing the form of a cowherd in the forest), the recognising of an analogy (e.g. remembering one's father by seeing someone similar to him) or an alternative, the seeing of what one's mind desires to see or out of sheer practice or real knowledge or the relistening to what one has heard once or the remembering of what one has seen or heard earlier - that gets called as memory (viz., these eight are the circumstances that would awaken a memory). Cs. sa. 1. 147-149.

स्मृतिः पूर्वानु भूतस्य अर्थस्य स्मरणं।

Memory is the knowledge born of experience, recollection of the meaning of what has been experienced earlier. Dass. sa. 1.17.

65. आहार शुद्धौ सत्व शुद्धिः सत्व शुद्धौ ध्रुवा स्मृतिः। स्मृतिलाभे सर्वग्रन्थीनां विप्रमोक्षः।।

By purity of food ensues purity of mind. By purity of mind ensues steady recollection. When recollection is secured there will be a liberation of all knots. Harita.

66. बुद्धि र्निश्चयात्मिका।

(*intelligence* :) The understanding that is determinative is intelligence; that is one of the qualities of an operative person (i.e. one who is positively active). Da. Ss. sa. 11. 17.

बुद्धि प्रसादः बुद्धेः निर्मलत्वम्, बुद्धेः स्फुटं यथावद् विषय ग्रहणे अकालुष्यं। मनः शुद्धौ बुद्धि प्रसादः।

The graciousness and the gift of intelligence (is) : clarity of intelligence, non-turbidity of intelligence in understanding the objectives (of the senses) exactly as they are. Gift of intelligence ensues from mind (that) is pure. Ss. ci. 33-2.

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बुद्धि भ्रष्टत्वम्, नित्यानित्ये हिताहिते यो विषमाभिनिवेशः सः बुद्धिविभ्रंश इति ज्ञेयः, समं बुद्धिर्हि पश्यति। उचिता बुद्धिः समं यथाभूतं पश्यति।

(Deviance in intelligence :) Deviance in intellect is to be known as that which is an unequable obsession as regards the eternal and the transitory, the wholesome and the unwholesome; it is intellect indeed that perceives what is equable (in a situation). The proper intellect discerns what is equable and in exactly the way it exists. Cakra. Cs. sa. 1.99.

अतीन्द्रयं पुनर्मनः सत्व संज्ञकं चेत इत्याहुरेके, तदर्थात्मसंपत्तदायत्त चेष्टं चेष्टा प्रत्यय भूतभिन्द्रियाणाम्।

(mind :) It is beyond the sense organs. Mind is the sign of the essence (in a person). The activities under the control of the self is for its sake. It constitutes the factor for the activities of the senses. Cs. su. 8.4.

67. धारणावती धीः।

(*mental vigour* :) The understading that aids in retention (of what is learnt) is mental vigour. Ss. sa. 3.33

मेधां ग्रन्थादि धारणेन परीक्षेत।

The mental vigour is to be examined by the retentivity (that a person exhibits) for the Technical treatises and the like (he has studied). Cs. vi. 4.8

बुद्धि मेधावर्धक पदार्थानां समूहः, सतताध्ययनं वादः परतन्त्रावलोकनं तद्विद्याचार्य सेवा चेति बुद्धिमेधाकरो गणः।

(*factors responsible for promoting mental vigour* :) Constant study, argumentation, reference work of other technical treatises, study (lit. service) of the masters expert in the special learnings that are concerned (for the purpose in hand) – these constitute the group (of factors) promoting mental vigour. Ss. su. ci. 28–27.

68. मोक्षे धीर्ज्ञानमन्यत्र विज्ञानं शिल्प शास्त्रयोः।

(*knowledge and science* :) The understanding (that is seen) in (securing) final emancipation is knowledge. The understanding (shown) anywhere else is expertise or science (as for instance), in (the matters) concerning engineering and technical treatises. Amarakosa.

(ix) *mental health*:

69. प्रेत्य चेह च यच्छ्रेयः श्रेयो मोक्षे च यत्परम्।
मनः समाधौ तत् सर्वमायत्तं सर्वदेहिनाम्।।

Whatever that is auspicious in the world beyond as well as in this world here and whatever is superb in (securing) final emancipation, the whole of this is embraced within the peace of mind for all beings. Cs. ci. 24. 52.

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70. समनसा ध्यायेत्-यद्वा अहं किंचन मनसा ध्यास्यामि तथैव तद्भविष्यति। तद्ध स्म तथैव भवति।

(*power of contemplation* :) A person should deeply meditate with his (own) mind: "Whatever it is that I contemplate with (my mind), it will happen or come about exactly in the same way." And. indeed, it will come about to be exactly in the same way. Gopatha brahmana.

71. श्रद्धामयोऽयं पुरुषो यो यत् श्रद्धः स एव सः।

(*faith* :) This (human) person is entirely made up of faith; whatever is his faith, that alone is he.

72. सत्यवादिनमक्रोधं निवृत्तं मद्यमैथुनम्। अहिंसकमनायासं प्रशान्तं प्रियवादिनम्।।
जप शौचपरं धीरं दाननित्यं तपस्विनम्। देव गोब्राह्मणाचार्य गुरुवृद्धार्चने रतम्।।
आनृशंस्यपरं नित्यं नित्यं करुणवेदिनम्। सम जागरण स्वप्नं नित्यं क्षीरघृताशिनम्।।
देशकाल प्रमाणज्ञं युक्तिज्ञमनहंकृतिम्। शस्ताचारमसंकीर्णमध्यात्म प्रवणेन्द्रियम्।।
उपासितारं वृद्धानां आस्तिकानाम् जितात्मनाम्। धर्म शास्त्रपरं विद्यान्नरं नित्यरसायनम्।।
गुणैरेतैः समुदितैः प्रयुङ्क्ते यो रसायनम्। रसायन गुणान् सर्वान् यथोक्तान् स समश्नुते।।
(इत्याचार रसायनम्)

(*elixir of conduct* :) A person who is a speaker of truth, does not become angry, is free from liquor and indulgence in sex, non-violent, does not take up tiresome activities, tranquil, speaks pleasantly, is intent on muttering God's name and keeping himself clean, courageous, constantly giving gifts, carries out penances; is engaged in worshiping gods, cows, brahmins, preceptors, teachers and the elderly; always far removed from cruelty; always merciful and of sympathetic understanding; balanced in wakefulness and sleep; constantly consuming milk and ghee; who knows the value of the proportions of place and time; who understands the strategies (needed for the occasion); is non-egoistic; has a disciplined conduct; non-complex, his sensibilities inclined towards what concerns the soul, who takes up the service of the elderly, the faithful and the self-restrained, and who is intent on treatises of *dharma* - such a person should be known as to be practising a constant elixirisation. If he who is endowed with such qualities employs a (specific medication of) elixirisation (in addition), - he will secure all the qualities of an elixir exactly as told (in the texts concerned). - This is the elixir of conduct. Cs. su. 1.4 30-35.

लोभ शोक भय क्रोध मान वेगान् विधारयेत्। नैर्लज्या ईर्ष्य अतिरागाणाम् अभिध्यायाश्च बुद्धिमान्।।
पुरुषस्य अतिमात्रस्य सूचकस्य अनृतस्य च। वाक्यस्य अकाल युक्तस्य धारयेत् वेगमुत्थितम्।।
देह प्रवृत्तिर्या काचित् विद्यते परपीडया स्त्री भोग स्तेय हिंसाद्या तस्या वेगान् विधारयेत्।।
पुण्य शब्दो विपापत्वात् मनो वाक्काय कर्मणाम्। धर्मार्थकामान् पुरुषः सुखी भुङ्क्ते चिनोति च।।

(*a general guideline* :) A wiseman should inhibit the urges (from getting their expression) of avarice, grief, fear, anger, and prestige as well as shamelessness, jealousy, too much of affection and desire to take away what belongs to others. So also should he keep down the upsurges of speaking excessively harsh words, insinuating words, falsehood and of talking what is untimely. He should inhibit whatever calls of his constitution that are there which will be harmful to others,

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enjoying an woman, theiving and violence. By following such measures, he will partake of *punya* (sanctity), be free from sins of mind, speech, body and activities and will enjoy religious merit, economic wealth as well as personal desires and prospers. Cs. su. 7.27-30.

73. शरीरं सत्व संज्ञं च व्याधीनामाश्रयो मतः। तथा सुखानां, योगस्तु सुखानां कारणं समः।

(*mental health and happiness:*) Body and what is designated as mind are (both) the seats of diseases, as well as happiness. The reason for happiness is an equilibrial combination (of the factors of time, intellect and sensitivities). Cs. su. 1.55

वायुः पित्तं कफश्चोक्तः शारीरो दोषसंग्रहः। मानसः पुनरुद्दिष्टो रजश्च तम एव च।।

Vāta, pitta and *kapha* constitute the gamut of vitiations of the body. Of the mind however, these (vitiations) are only (two:) *rajas* and *tamas*. Cs. su. 1. 57.

त्यागः प्रज्ञापराधानामिन्द्रियोपशमः स्मृतिः। देशकालात्मविज्ञानं सद् वृत्तस्यानुवर्तनम्।
आगन्तूनामनुत्पत्तौ एष मार्गो निदर्शितः। प्राज्ञः प्रागेव तत् कुर्याद्धितं विद्याद्यदात्मनः।।

Rejection of wilful offences, quietening down of the senses, (salutary) retentiveness, a proper appreciation of the factors of the place, time and one's own self, a following of the prescriptions of a good mode of life - this is the way indicated for not giving rise to (diseases) that have not yet come. A wise man should do what he considers wholesome to himself, earlier itself (i.e., before a disease sets in).

आप्तोपदेशप्रज्ञानं प्रतिपत्तिश्च कारणम्। विकाराणामनुत्पत्तौ उत्पन्नानां च शान्तये।।

The special attention to the teachings of the trustworthy and following them properly in practice - these help in non generation of aberrations as well as quietening down of what has already become generated. Cs. su. 7. 54, 55

74. मनसस्तु चिन्त्यमर्थः। तत्र मनसो मनो बुद्धेश्च त एव समानातिहीन मिथ्या योगाः प्रकृति विकृति हेतवो भवन्ति।

The object of mind is that which is thinkable. If is these thinkables only and their balanced or excessive, deficient and wrong combinations that become the causes (respectively) for a) the natural or b) the distorted state of the mind and the understanding. Cs. su. 8.16.

तत्रेन्द्रियाणां समनस्कानामनुपतप्तानाम् अनुपतापाय प्रकृति भावे प्रयतितव्यं एभिर्हेतुभिः, तद्यथा सात्मेन्द्रियार्थ संयोगेन बुद्ध्या सम्यगवेक्ष्यावेक्ष्य कर्मणां सम्यक् प्रतिपादनेन देशकालात्मगुण विपरीतोपासनेन चेति।

Therein, one should be taking efforts to keep the unirritated sense organs along with the mind in their unirritated and natural state of health by the means as follows: This is : by properly resorting to the activities (one undertakes) after carefully scrutinising them first in all propriety and in every way (lit. scrutinising it again and again) by (means of) one's own intellect (that is) kept in compatible (viz. *not distorted*) contact with the sense objects and meanings and also by taking

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up those (measures) that counteract the prevailing traits of clime, season and one's own constitution (*in case these latter are unwholesome*). Cs. su. 8.17.

तस्मादात्माहितं चिकीर्षता सर्वेण सर्वं सर्वदा स्मृतिमास्थाय सद्वृत्तमनुष्ठेयम्।

Therefore all those who desire their own welfare should keep everything in mind and practice the rules of good conduct.

75. धीधृति स्मृति विभ्रष्टः कर्म यत्कुरुतेऽशुभम्। प्रज्ञापराधं तु विद्यात् सर्व दोष प्रकोपकम्।।

(*prevention of upsettings* :) Whatever act one performs, deviating from intellectual comprehension (*of the act concerned*), the courage and the fortitude (*one can bring in for the occasion*) or recollections (*of all the factors concerned*), know that every one of these is an offence committed because of the lack of proper discernment, and is thus a wilful offence. It is this that causes the aggravation of every possible vitiation.

ये भूत विषवाय्वग्नि संप्रहरादिसंभवः। नृणां आगन्तवो रोगाः प्रज्ञा तेषु अपराध्यति।।
इर्ष्या शोक भय क्रोध मान द्वेषादयश्चये। मनो विकाराः तेऽप्युक्ताः सर्व प्रज्ञापराधजाः।

Whatever accidental diseases that are there and affect men such as those that arise due to (possession by) spirits, poison, bad air and the striking by fire-in all of these even, it is the person's discernment that is at fault. (For, if one exercises proper discernment one can avoid every one of these afflicitions). Those mental disorders such as greed, grief, fear, anger, pride, hatred and the like - all of these even are spoken of as being born of a wilful offence (*committed by a person, for, the latter can always avoid them by a proper discernment of the situation*).

76. त्यागः प्रज्ञापराधानाम् इन्द्रियोपशमः स्मृतिः। देशकालात्मविज्ञानं सद्वृत्तस्य अनुवर्तनम्।।
आगन्तूनां अनुत्पत्तौ एष मार्गो निदर्शितः। प्राज्ञः प्रागेव तत् कुर्यात् हितं विद्यात् यदात्मनः।।

(*mental health* :) Abandoining wilful offences; keeping calm and tranquil in one's sense organs and sensitivities; remembrance; knowledge of what is proper to the place, the time and the self; close following of the rules of a good conduct -- this is the path indicated towards the non-origin of the exogenous diseases (*somatic as well as mental*). The intelligent person should take up that step beforehand itself, if he knows his own welfare. Ca. su. 7. 53, 54

आप्तोपदेश प्रज्ञानं प्रतिपत्तिश्च कारणम्। विकाराणामनुत्पत्तौ उत्पन्नानां च शान्तये।।

The wisdom (*and the discernment*) that arises by the teachings of the trustworthy and following fully of the dictates of this wisdom - this constitutes the reason for the mitigation of the diseases that have already arisen. Cs. su. 7.55.

पाप वृत्त वचसत्वाः सूचकाः कलह प्रियाः। मर्मोपहासिनो लुब्धाः परवृद्धि द्विषः शठाः।।
परापवादरतयश्चपला रिपुसेविनः। निर्धृणास्त्यक्त धर्माणः परिवर्ज्या नराधमाः।।

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Those who are sinful of conduct, speech and disposition, the backbiters and the quarrelsome : the sarcastics and the niggards; those who are envious of other's prosperity and the cheats; those who take delight in scandal-mongering and are fickle-minded; those who serve the enemy's interest; those who have no compunction and the apostates; all such, the scum of humanity should be shunned. (to keep up one's own mental health and happiness).

बुद्धि विद्यावयः शील धैर्य स्मृति समाधिभिः । वृद्धोपसेविनो वृद्धाः स्वभावज्ञा गत व्यथाः ।।
सुमुखाः सर्वभूतानां प्रशान्ताः शंसितव्रताः । सेव्या सन्मार्गवक्तारः पुण्य श्रवण दर्शनाः ।।

Those who are mature in understanding, learning, age, character, courage, memory, and comtemplativenses; those who frequent and serve such persons; the elderly; those who are insightful regarding the innate nature of things and who (themselves) do not have any ailment; those who are well disposed towards all beings; the tranquil; the teachers of the right path and those who hear and see only that which is meritorious and holy - these types of persons should be sought after and served (to promote one's own mental health and happiness). Cs. sa. 7. 56-58.

आहार आचार चेष्टासु सुखार्थी प्रेत्य चेह च। परं प्रयत्न मातिष्ठेत् बुद्धिमान् हित सेवने।।

The wiseman desirous of happiness here and hereafter should be ever vigilant in seeking what is wholesome in the matters of food, conduct and behaviour. Cs. sa. 7.60.

77. तस्मात् आत्महितं चिकीर्षता सर्वेण सर्वं सर्वदा स्मृति मास्थाय सद्वृत्तं अनुष्टेयम्।।

(*mental health - rules of good conduct* ;) Therefore, by all who desire their own welfare should always keep all (the factors concerned) in (active) memory and follow the pathway of good conduct. Cs. su. 8.17.

तद्धि अनुतिष्ठन् युगपद् संपादयति अर्थद्वयं आरोग्यं इन्द्रियविजयं चेति।।

By following this, one attains two objectives; health and conquest of the senses. Ca. su. 8.18.

तत्सद्वृत्तं अखिलेनोपदेक्ष्यामोऽग्निवेश। तद्यथा... पूर्वाभिभाषी सुमुखः दुर्गेषु अभ्युपपत्ता... काले हितमित मधुरार्थवादी वश्यात्मा धर्मात्मा हेतावीर्ष्युः फले नेर्ष्युः ... निश्चिन्तः निर्भीतः ह्रीमान् धीमान् महोत्साहः दक्षः क्षमावान् धार्मिकः आस्तिकः विनय वुद्धि विद्याभिजन वयोवृद्ध सिद्धाचार्याणाम् उपासिता... मंगलाचार शीलाः ... सर्व प्राणिषु बन्धुभूतः स्यात्
क्रुद्धानामनुनेता भीतानामाश्वासयिता दीनानां अभ्युपपत्ता सत्यसन्धः सामप्रधानः परपरुष वचन सहिष्णुः अमर्षघ्नः प्रशमगुणदर्शी रागद्वेष हेतूनां हन्ता च।।

We shall teach that good conduct in totality, Agnivesa ; This is how it is...If he meets somebody, he should himself start the conversation earlier and not wait for the others to do so. He should be well disposed. If somebody gets into a difficulty he should himself readily jump in to help. His talk should be timely, wholesome, limited, sweet and meaningful. He should be self-controlled, *dharmic* by nature, jealous of the cause of others' prosperity and not the fruit thereof (*so that he would make this*

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factor as a point for striving similarly for the porsperity and not merely be greedy about),.....non worrying, fearless, shy, mentally alert, highly enthusiastic, capable, forgiving; a doer of *dharma* ; a believer (and not an agnostic); be serving the individuals, the sages and the preceptors who are elderly in humility, intelligence, learning, family and status;....his conduct, habitually auspicious.... He should be like a friend to all; should bring around the angry in a gentle manner; be assuaging to the frightened; jump in to assist the helpless; truthful; prodominantly (serving for) calmness (in every thing); tolerant towards others' harsh words; a destroyer of intolerance and anger; a seer of the pacification (every where) and be a destroyer of the causes of passion and hatred.

नानृतं ब्रूयात् नान्यस्वं आददीत नान्य स्त्रियं अभिलपेन्नान्याश्रियं न वैरं रोचयेत् न कुर्यात् पापं न पापेऽपि पापीस्यात्; नान्यदोषान् ब्रूयात् नान्य रहस्यमागमयेत् नाधार्मिकैर्न नरेन्द्रद्विष्टैः सहासीत नोन्मतैः न पतितैः भ्रूण हन्तृभिर्न क्षुद्रैः दुष्टैः...न उच्चैः हसेत् न शब्दवन्तं मारुतं मुंचेत् न अनावृत मुखो जृंभां क्षवथु ह्रास वा प्रवर्तयेत् न नासिकां कुष्णीयात् न दन्तान् विघट्टयेत् न नखान् वादयेत्... न उत्तमैः विरुध्येत न अवरानुपासीत न जिह्मं रोचयेत् न अनार्यमाश्रयेत् न भयामुत्पादयेत् न साहसं अति स्वप्नप्रजागर स्नान पान अशनानि आसेवेत...

He should not tell lie; take other's property; desire other's woman or wealth; should not like enmity; should not indulge in sin and should not be sinful even for the sinful; should not talk about the blemishes of others, or seek forth the secrets of others; should not stay with the non *dharmic* or those who are hated by the king, or the mad, the morally fallen, the abortionist, the lowly and the wicked.....should not laugh very loudly; should not let the flatus with a sound; should not proceed to yawn, sneeze or laugh without covering the mouth; should not poke the nose (with the fingers) or chatter the teeth or fiddle the nails...should not confront the excellent; should not serve the lowly; should not desire what is crooked (or) take shelter under the ungentlemanly; should not cause fear; should not indulge in adventurism or excessive sleeping, wakefulness, drinks or food.

न अधीरो न अति उच्छ्रित सत्वः स्यात् न अभृतभृत्यः न अविश्रब्धस्वजनः नैकः सुखी न दुःख शीलाचा रोपचारः न सर्व विश्रम्भी न सर्वाभिशंकी न सर्वकाल विचारी।

He should not lack in bravery but not be over bearingly roughshod; should not withhold what is due to his servants; should not cast a doubt over the people who are his own; should not be happy all alone; should not indulge in conducts and activities that bring unhappiness; should not disbelieve one and all; (and), should not be brooding about always.

न कार्य कालमतिपातयेत् नापरीक्षितमभिनिविशेत् नेन्द्रियवशगः स्यात् न चंचलं मनोऽनुभ्रामयेत् न बुद्धि इन्द्रियाणामतिभारमादध्यात् न चातिदीर्घसूत्री स्यात् न क्रोध हर्षावनुविदध्यात् न शोकमनुवसेत् न सिद्धावुत्सेकं यच्चेन्नासिद्धौ दैन्यं प्रकृतिमभीक्ष्णं स्मरेत् हेतुप्रभाव विनिश्चितः स्यात् हेत्वारम्भ नित्यश्च न कृतमिति आश्वसेत् न वीर्यं जहयात् नापवादमनुस्मरेत्।।

He should not just waste the time meant for work; should not take up any work immediately without examining it; should not be in the hold of his own senses; should not undertake what is too heavy for his own mind or the senses; should not be planning only for too long a time; should not do a work under the hold of anger or delight; should not continue to greive; should not be exhibiting too much delight

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if a work is accomplished or complete helplessness if it is not; should always bear in mind what is natural in a situation; he should know fully that any thing happenes as per the influence of the cause behind it(*and not by just chance viz., if he desires something good, he should do what is needed for it; if something not to his liking happens, there is always a cause for it which he can search about*); he should always commence a work according to the reasons (that are valid there); he should never presume that a work he has taken up will always be fulfilled in the way he desires; should not waste his virility; should not be recollecting the insult he has received again and again.

ब्रह्मचर्य ज्ञान दान मैत्री कारुण्य हर्षोपेक्षा प्रशमपरश्च स्यादिति।

(In fine), he should be intent on celibacy, knowledge, giving gift, friendliness, compassion, delight, ignoring (the inessentials) and peace.

स्वस्थवृत्तं यथोद्दिष्टं यः सम्यगनुतिष्टति। स समाः शतमव्याधिरायुषा न वियुज्यते।।
नृलोकमापूरयते यशसा साधु संमतः। धर्मार्थायेति भूतानाम् बन्धुतामुपगच्छति।।
परान् सुकृतिनो लोकान् पुण्य कर्मा प्रपद्यते। तस्मात् वृत्तमनुष्ठेयमिदं सर्वेण सर्वदा।।

He who follows the good conduct as told here properly will not be separated from a healthy life for hundred years. He would fill the whole world of men with his own fame and would be extolled by the gentle, secure *dharma* as well as economic prosperity and acquire friendship of all. Afterwards he would secure the worlds meant for the doers of the good. Therefore this (good) conduct should always be practiced by all.

यच्चान्य दपि किंचित्स्यादनुक्तमिह पूजितम्। वृत्तं तदपि च आत्रेयः सदैव अभ्यनुभन्यते।।

Whatever else is there not told here but worthy, Atreya always extols that type of conduct also. Cs. su. 8.18-34.

(x) *mental disorders*

("Due to historical reasons, Ayurvedic literature dealing exclusively on mind and mental disorders are not available. However the scattered aphoristic material...in the treatises are richly useful in understanding mind and treating mental disorders, if only they are carefully collated to our present needs; "MGR)

1. psychosomatics (influence of the mind over the body) *interdependence of the body, the mind and the soul or the self*

78. शरीरेन्द्रिय सत्वात्म संयोगो धारि जीवितम्। नित्यगश्च अनुबन्धश्च पर्य्यायैरायु रुच्यते।।

It is the combination of the body, (with its) sensory organs, the mind and the self that is spoken of as *āyu* or life (and none of them, in isolation); its (other) alternative terms are *dhāri* (sustainer, of the organism), *jīvita* (the living), *nityaga* (in perpetual flux) and *anubandha* (an inseparable consequence, of this very combination). Sc. su. 1.42.

interdependence even from the embryonic stage.

79. बीजात्मकैः महाभूतैः सूक्ष्मै सत्वानुगैश्च सः। मातुराहार रसजैः क्रमात् कुक्षौ विवर्द्धते।।

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The foetus develops within the womb gradually by means of the (characteristics of the) five primordial elements that have gone into the (constitution of the) seed (viz., the physical characteristics of the foetus) and the accompanying subtle mind (of the foetus) as well as the resultant of the nutrient fluids of the mother. Ah. sa. 1.2

व्यक्ती भवति मासेऽस्य तृतीये गात्र पंचकम्। मूर्द्धा द्वे सक्थिनी बाहू सर्वसूक्ष्मांग जन्म च।
सममेव हि मूर्द्धाद्यैर्ज्ञानं च सुख दुःखयोः। ...चतुर्थे व्यक्तताऽङ्गानां चेतनायाश्च पंचमे।।

The pentad of the divisions of the body viz., the head, the two legs and the two arms become manifested in the third month of this (developing foetus) and there is the subtle birth of all the organs as well(during this month). Along with the (origin of the) head and the like itself, there is the commencement of the knowledge of happiness and distress....There will be the full manifestation of the organs in the fourth month and of the mind in the fifth month. Ah.Sa. 1.57.

(*mental disorders : a listing and classification*)

(a) *mānasavikāra* neurosis; *abhyasuya* jealousy, *bhaya* fear, *cittodvega* anxiety, *dainya* meanness or inferiority complex, *harṣa* exhiliration, *kāma* lust, *krodha* anger, *lobha* greed, *mada* arrogance, *māna* pride, *moha* infatuation, *śoka* grief, *viṣāda* anguish, *īrṣyā* envy.

(b) *nānātmaja* (due to various causes): cittodvega *anxiety, viṣada* anguish, *aśabda sravaṇa* auditory hallucination, *tama* dullness and withdrawal, *atipralapa* prattlings, *aswapna* insomnia, *anavasthita cittatva* unsteadiness of the mind, *atṛpti* discontentness, *tandrā* stupor, *atinidrā* excessive sleep, *bhrama* confusion.

(c) *ubhayātmaja* (due to somatic as well as mental causes): *unmāda* psychosis, *apasmāra* epilepsy, *apatānaka* spasmodic contraction, *apatantraka* hysteria, *atatwābhiniveśa* obsessive syndrome, *madātyaya* alchoholic psychosis, *sanyāsa* coma.

(d) *kāmajvara* fever caused by lust, *krodhaŕa jwara* fever caused by anger, *bhayaja atisāra* a diarrhoea caused by fear, *śokaja atisāra* diarrhoea caused by grief.

तस्येमानि पूर्व रूपाणि, तद्यथा-शिरसः शून्यता चक्षुषोराकुलता स्वनः कर्णयोः उच्छ्वासस्य आधिक्यम् आस्य संस्रवणम् अनन्नाभिलाषा रोचकाविपाकाः हृद्ग्रः ध्यानायाससंमोहोद्वेगाश्च अस्थाने सततं लोमहर्षः ज्वरश्चा भीक्ष्णम् उन्मत्त चित्तत्वम् उदर्दित्वम् अर्दिताकृतिकरणं व्याधेः स्वप्ने चाभीक्ष्णं दर्शनं भ्रान्त चलितानवस्थितानां रुपाणामप्रशस्तानां च तिलपीडकचक्राधिरोहण वातकुण्डलिकाभिश्चोन्मथनं निमज्जनं च कलुषाणां अभ्यसामावर्ते चक्षुषो श्चाप सर्पणमिति।

insanity ; premonitory symptoms : These are its premonitary symptoms, such as : a feeling of voidness in the head, perplexity of the eyes, noises in the ears; hurried respiration (excess of expiration); dribbling at the mouth, inappetence, anorexia, non-assimilation, cardiac spasm; misplaced mental absorption, fatigue and anxiety (emotional outbursts); constant horripilation, frequent fever; intoxicated state of the mind; pain in the upper part of the body; appearance of the features presented in the diseases of facial paralysis; frequent seeing in dreams of roving, moving, unsteady and unpraiseworthy forms, or of (one self) sitting mounted on the wheel of the oil-press, or being churned as it were by whirl-winds, or sinking in whirl pools of dirty water; and, the retraction of the eye-balls. Cs. ni. 7.6.

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(*An Ayurvedic scheme of mental examination, directly utilising this statement* :) This is to examine the patient in terms of the following : 1. *śila* (habits, temperaments, etc.) i) habits, ii) temperaments, iii) physiological functions, iv) leisure time activity, 2. *Ceṣṭa* (psychomotor activity)-i) general motor activity, ii) speech iii) facial expression, iv) posture, 3. *ācārah* (conduct)-i) personal standards, ii) social standards, 4. *manah* (mind)-i) *indriyābhigraha* (perception and motor control)ii) *manonigraha* (mental control), *uha* (guess) *vicāra* (thought), 5. *buddih* (decision), 6. *smṛti* (memory),7 *samjna jnanam* (orientation and responsiveness)-i) orientation to a) *deśah* (place), b) *kalah* (time), c) *abhijnāna* (person)ii) responsiveness to external stimulii, 8. *bhakti* (desire) in relation to i) *āhāra* (food), ii) *vyavāya* (sex), iii) *veṣam* (dress), iv) *ranjanam* (entertainemnt) and v) *anya* others. MGR.

insanity

(Quotations on mind, mental diseases including insanity, mental health, etc. included in this anthology are rather large in number, because the viewpoint in all this seems much relevant now, topical and often worthwhile exploring further by correlative studies of what is found in modern medicine.

Insanity is traced as elsewhere mainly to the three vitiations *vāta, pitta* and *kapha* ; and, the descriptions given are also characteristically different, so that finding analogies in modern medicine is worthwhile, for instance how can we correlate the distinctive descriptions of the *vāta, pitta* and *kapha* insanities to the modern concepts either descriptively or etiologically ?)

80. इह खलु पंचोन्मादा भवन्तिः तद्यथा-वातपित्त कफ सन्निपातागन्तु निमित्ताः ।

kinds, susceptible persons and a definition : Now there occur five (kinds of) insanities. This is due respectively to *vāta, pitta, kapha,* all of them together and to an extraneous cause. Cs. ni. 7.3.

81. तत्र दोषनिमित्ताश्चत्वारः पुरुषाणां एवं विधानां क्षिप्रमभिनिर्वतन्तेः तद्यथा-भीरुणामुपक्लिष्ट सत्वानामुत्सन्न दोषाणां समलविकृतोपहितान्यनुचितान्याहारजातानि वैषम्य युक्ते नोपयोग विधिनोप युंजानानां तन्त्र प्रयोगमपि विषममाचरतां अन्याश्च शरीरचेष्टा विषमाः समाचरतामत्युपक्षीण देहानां व्याधिवेग समुद्भ्रमितानामुपहत मनसानां वा काम क्रोध लोभ हर्ष भय मोहायास शोक चिन्तोद्वेगादिभिः भूयोऽभिधाताभ्यहतानां वा मनस्युपहते बुद्धौ च प्रचलितायां अभ्युदीर्णा दोषः प्रकुपिता हृदयमुपसृत्य मनोवहानि स्रोतांस्यावृत्य जनयन्त्युन्मादम् ।

Therein, the four due to the vitiations (i.e. the first four of the above list), develop most readily in persons of the following kinds : the faint-hearted, those suffering from mental shock, the vitiation-ridden, those who use in a contrary manner the improper dietary articles which are unclean and ill prepared, those who abuse the general rules of healthful living, as also those who resort to other (i.e. forbidden) kinds of wrongful bodily activity, those who are exceedingly wasted in body, those who are crazed with the severity of a disease, or those whose minds have been impaired by repeated attacks of lust, anger, greed, excitement, fear, infatuation, fatigue, grief, anxiety, emotional outbursts and the like and also those that are injured by trauma. (In such persons) the mind having been imparied and the understanding unsettled, the exacerbated vitiations, further provoked and reaching the heart (the brain) and blocking the channels of nervous communication generates insanity. Cs.ni. 7.4

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उन्मादं पुनर्मनो बुद्धि संज्ञा ज्ञान स्मृति भक्ति शीलचेष्टाचार विभ्रमं विद्यात्।

Insanity should be known as an unsetted condition or, a deviation from normalcy of (*any, or all of the following*) mind,understanding, consciousness, perception, memory, (temperamental) inclinication, character, behaviour and conduct. Cs. ni. 7.5.

82. ततोऽनन्तरमेवमुन्मादाभिर्निवृत्तिरेव। तत्रेदमुन्मादविशेषविज्ञानं भवतिः तद्यथा-परिसरण मजस्रमु, अक्षिभ्रुवौष्ठांस हन्वग्रहस्त पादाङ्.ग विक्षेपणमकस्मातु, सततमनियतानां च गिरामुत्सर्गः, फेनागमनमास्यातु, अभीक्ष्णं स्मित हसितनृत्यगीत वादित्र संप्रयोगाश्च अस्थाने, वीणा वंश शंख शम्यातालं शब्दानुकरणमसाम्ना, यानमयानैः, अलंकरणमनलंकारिकैर्दव्यैः, लोभश्चाभ्यवहार्येष्वलब्धेषु, लब्धेषु च अवमानः तीव्रं मात्सर्यं च, कार्श्यं, पारुष्यम् उत्पिण्डितारुणाक्षता वातोपशय विपर्यासादनुप शयता चः इति वातोन्माद लक्षणानि भवन्ति।

types : Soon after, these (indications), insanity, manifests itself. Here is the knowledge of the specialities of insanity, such as; constant rambling; sudden jerking about of the eyes, the eyebrows, the lips, the shoulders, the jaw, foreparts of the arms, feet and other parts of the body; emission of words (i.e. talking) constantly and without control; flowing of froth from the mouth; frequent and inopportune smilling, laughing, dancing, singing and playing on instruments; giving loud imitation of the sounds of lute, flute, conch and cymbals (of the left and the right hand), trying to ride on mounts not in vogue, adorning oneself with queer and unornamental objects; hankering after unobtainable viands and actual contempt or extreme hatred for those in actual possession; emaciation and roughness (of the body) and swelling and redness of the eyes; non-homologation to the antagonistics of the vata - these are the symptoms of insanity of the vata type. Cs. ni. 7 6(1).

अमर्षः क्रोधः संरम्भश्च अस्थाने शस्त्र लोष्ट्र कशाकाष्ट मुष्टिभिरभिहननं स्वेषां परेषां वा अभिद्रवणं प्रच्छाय शीतोदकान्नाभिलाषः संतापश्चातिवेलं ताम्र हरित हरिद्रसंरब्धाक्षता, पित्तोपशय विपर्यासादनुपशयता चः इति पित्तोन्माद लिंगानि भवन्ति।

Irritability, anger; excitement in the wrong place; striking oneself or others with weapons, brickbats, whips, sticks and fists; running about; craving for shade, cool water and food; prolonged anguish; coppery, green , yellow and furious look of the eyes, and non-homologation to the antagonistics of *kapha* - these are the symptoms of insanity of the *pitta* type. Cs. ni. 7.6(2)

स्थानमेकदेशे तूष्णीं भावः अल्पशश्चङ्.क्रमणं लालार्शिघ्राणकस्रवणम् अनन्नाभिलाषः रहस्कामता बीभत्सत्वं शौच द्वेषः स्वप्न नित्यता श्वयथुरानने शुक्लस्तिमितमलोपदिग्धाक्षत्वं श्लेष्योपशय विपर्यासादनुपशयता चः इति श्लेष्मोन्माद लिंगानि भवन्ति।

Being rooted to one place, an attitude of (complete) silence, little disposition for movement, dribbling of saliva and nasal discharge, inappetance, love for solitude and secrecy, offensiveness, hatred of cleanliness, constant sleepiness, edema of the face; whiteness, stickingness, darkness and covering of mucus discharge of the eyes and nonhomologation to the antagonistics of *kapha* - these are the symptoms of insanity of the *kapha* type. Cs. ni. 7 6 (3).

त्रिदोषलिंग सन्निपाते तु सान्निपातिकं विद्यात्। तमसाध्यमाचक्षते कुशलाः।

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If there occur symptous of all the three vitiations, this should be known as due to their synergesis. Experts say that this type of insanity is incurable. Cs. ni 7.7

83. यस्तु दोष निमित्तेभ्य उन्मादेभ्यः समुत्थान पूर्वरुप लिंग वेदनोपशय विशेष समन्वितो भवत्युन्माद स्तमा गन्तुकमाचक्षते। केचित् पुनः पूर्वकृतं कर्म प्रशस्तमिच्छन्ति तस्य निमित्तम्। तस्य च हेतुः प्रज्ञापराध एवेति भगवान् पुनर्वसुरात्रेयः। प्रज्ञापराधाद्धययं देवर्षिपितृगन्धर्व यक्षराक्षस पिशाच गुरुवृद्ध सिद्धाचार्य पूज्यान् अवमत्य अहितान्याचरति, अन्यद्ध किंचिदेवंविधं कर्मा प्रशस्तमारभते। तमात्मना हतम् उपघ्नन्तो देवादयः कुर्वन्त्युन्मत्तम्।

That form of insanity however, which presents causes, premonitory symptoms, symptoms, sufferings and pains and homologations that are different from those which are due to vitations, is said to be exogenous. Some on the contrary would have it that such insanity is due to reprehensible actions done earlier (in previous existences). But the revered Atreya Punarvasu opines that the reason for this also is volitional transgression that a man commits when he does unwholesome things or commences some unworthy activities of this type by disregarding the gods, the seers, the manes, the *gandharvas*, the *yakṣas*, the demons, the goblins; the seniors, the elders, the preceptors, and the (other) worthies. Assailing such a man who has actually assailed himself (by these acts), the gods and the others render him insane. Cs. ni. 7.10

84. तस्येमानि रुपाणि भवन्तिः तद्यथा- अत्यात्मबलवीर्य पौरुषपराक्रमग्रहण धारणस्मरण ज्ञान वचन विज्ञानानि, अनियतश्च उन्माद कालः।

Insanity due to seizure by spirits ; these are its characteristics : superhuman strength, energy, capacity, valour, grasp, retention, memory, understanding, speech and expertise; inderterminate is the time of the manifestation for this kind of insanity. Cs. ni. 7.13.

85. उन्मादयिष्यतामपि खलु देवर्षिपितृगन्धर्व यक्षराक्षस पिशाचानां गुरुवृद्ध सिद्धानां वा एष्वन्तरेषु अभिगमनीयाः पुरुषा भवन्तिः तद्यथा-पापस्य कर्मणः समारम्भे पूर्वकृतस्य वा कर्मणः परिणामकाले एकस्य वा शून्यगृहवासे चतुष्पथाधिष्ठाने वा सन्ध्यावेलायामप्रयत भावे वा पर्व सन्धिषु वा मिथुनी भावे रजस्वलाभिगमने वा विगुणे वाऽध्ययन बलि मंगल होम प्रयोगे नियम व्रत ब्रह्मचर्य भंगेवा महाहवे वा देशकुल पुर विनाशे वा महाग्रहोपगमने वा स्त्रिया वा प्रजनन काले विविध भूता शुभाशुचि स्पर्शनि वा वमन विरेचन रुधिरस्रावे अशुचेरप्रयतस्य वा चैत्य देवायतनाभिगमने वा मांस मधुतिलगुडमद्योच्छिष्टेवा वा दिग्वाससि वा निशि नगर निगम चतुष्पथोपवनश्मशानाघातनाभिगमने वा द्विज गुरू सुरयतिपूज्याभिघर्षणे वा, धर्माख्यान व्यतिक्रमे वा कर्मणोऽप्रशस्तस्य आरम्भे इति अभिघातकाला व्याख्याता भवन्ति।

Persons become liable to the malign influence of the gods, the sages, the manes, *gandharvas, yakṣas*, demons and goblins or of the preceptors, the elders and the adepts desirous of inducing madness, at the following junctures; such as, at the commencement of a sinful act, at the time of the fruition of former misdeeds, while residing alone in a deserted house, at the crossing of the four roads, when failing to practice self-control during the twilights, during sexual congress at the turning times (such as the full and the new moon days), while cohabiting with a menstruating woman; during any impropriety at the time of scriptural studies, offerings, auspicious rites and sacrifices; on lapsing in a discipline, a vow, or celebacy; in great battles or at the destruction of a country, a family or a city; when eclipses occur; for ladies,

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at the time of delivery; at the contact of various kinds of inauspicious and unclean objects while vomiting, purging or bleeding; while visting holy places and temples in an unclean and an improper state; while in an uncleansed condition after eating flesh, honey, sesame, jaggery and wine; in a state of nakedness; while traversing at night through a town, cross roads, park, cremation ground or a place of slaughter; while engaged in insulting the brahmins, the preceptors, the gods, the ascetics and the venerables; while mispropounding scriptures; or while performing any other unworthy acts;-thus is commented the time of the seizure of insanity. Cs. ni. 7.14

86. नैव देवा न गन्धर्वा न पिशाचा न राक्षसाः । न चान्ये स्वयमक्लिष्टमुप क्लिश्नन्ति मानवम् ।।
येत्वेन मनुवर्तन्ते क्लिश्यमानं स्वकर्मणा । न स तद्धेतुकः क्लेशो न ह्यस्ति कृतकृत्यता ।।
प्रज्ञापराधात् संभूते व्याधौ कर्मज आत्मनः । नाभि शंसेद् बुधो देवान्न पितॄन्नापि राक्षसान् ।।
आत्मानमेव मन्येत कर्तारं सुखद्वःखयोः । तस्माच्छ्रेयस्करं मार्गं प्रतिपद्येत नो त्रसेत् ।।
देवादीनामपचितिर्हितानां च उपसेवनम् । ते च तेभ्यो विरोधश्च सर्वमायत्तमात्मनि ।।

Neither gods, nor the *gandharvas* , neither the goblins nor the demons, nor anything else torment the man who is not tormented of himself. These supernatural spirits who pursue their suffering victim by the compulsion of his misdeeds are not the authors of his sufferings; for they are not the authors of his actions either. The wise man when afflicted with a disease which has arisen from volitional transgression and is the result of his own action, should not rail against the gods, the manes or even the demons. He should regard himself alone as the author of his happiness and unhappiness. Therefore he should take up what is good for oneself and should not allow himself to be fear-stricken. Reverence for the gods and the like and the practising of wholesome things-these are in the control of oneself. 19-23.

87. इह खलु चत्वारोऽपस्मारा भवन्ति वातपित्तकफसन्निपात निमित्ताः ।

epilepsy : Now there occur four (kinds of) epilepsies, due to *vāta, pitta* and *kapha* and their synergesis. Cs. ni. 8.3.

त एवं विधानां प्राणभृतां क्षिप्रमभिनिर्वर्तन्तेः तद्यथा-रजस्तमोभ्यामुपहत चेतसामुद्भान्त विषम बहुदोषाणां समलविकृतोपहितान्य शुचीन्यदभ्यवहारजातानि वैषम्य युक्तेनोपयोग विधिनोपयुंजानानां तन्त्र प्रयोगमपि च विषममा चरतामन्या श्च शरीर चैष्टा विषमाः समाचरतामत्युपक्षयाद्व दोषाः प्रकुपिता रजस्तमोभ्यामुपहत चेतसाम् ।

This develops quickly among the subjects of these kinds; such as - those whose minds are obscured by passion and delusion; those in whom the vitiations have deviated from their course or those who use improper, unclean and ill prepared dietary articles in a manner forbidden dietetically; those who abuse the general rules of healthful living; those resorting to other kinds of wrongful bodily activity, those in whom the morbid humors have become exacerbated because of extreme emaciation and those whose minds are obscured by passion and delusion. Cs.ni.8.4.

अपस्मारं पुनः स्मृति बुद्धि सत्वसंप्लवात् बीभत्स चेष्टामावस्थिकं तमः प्रवेशमाचक्षते ।

Epilesy is spoken of as an entry of darkness (i.e. loss of consciousness) due to a paraxysmal disturbance of memory, understanding and mind attended with convulsive movements (seizures). Cs. ni. 8.5.

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तस्येमानि पूर्व रुपाणि भवन्ति; तद्यथा-भ्रुव्युदासः सततमक्ष्णोर्वैकृतमशब्द श्रवणं लालासिङ् घाण प्रस्रवणमनन्नाभिलषणमरोचकाविपाकौ हृदय ग्रहः कुक्षेराटापो दौर्बल्यमस्थि भेदौ अंगमर्दो मोहस्तमसो दर्शनं मूर्च्छा भ्रमश्चाभीक्ष्ण स्वप्ने च मद नर्तन व्यधन व्यथन वेपन पतनादीनीति।

These are its premonitory symptoms : such as, spasmodic movements of the eye-brows, constant distortions of the eyes, acousma (hearing sounds when there are none), dribbling of saliva and nasal discharge; inappetance, anorexia and non-assimilation; cardiac spasm, sounds in the abdomen, debility, bone-cracking, body-ache, delusion, seeing dark, fainting, giddiiness, frequent (appearance) in dreams (of scenes) of intoxication, dancing, piercing, affliction, trembling, falling and the like. Cs. ni. 8.6.

ततोऽनन्तरं अपस्माराभिनिर्वृतिरेव।

Then immediately there is the development of the epilepsy itself. Cs. ni. 8.7.

तत्रेदमपसमारविशेष विज्ञानं भवति; तद्यथा- अभीक्षमापस्मरन्तं क्षणेन संज्ञां प्रतिलभमानम् उत्पिण्डिताक्षम् असाम्ना विलपन्तम् उद्धमन्तम्फेनम् अतीवाध्मातग्रीवम् आविद्धशिरस्कं विषम विनतांगुलिम् अनवस्थितपाणिपादम् अरुण परुषश्याव नख नयन वदन त्वचम् अनवस्थित चपल परुषरुक्षरुपदर्शिनं वातलानुपशयं विपरीतोपशयं च वातेनापस्मरन्तं विद्यात्।

Therein, this is the knowledge of the specialities (i.e. types of) epilepsy; such as - frequent epileptic fits but regaining consciousness in a moment ; eyes bulged out ; crying loudly, emitting frothy saliva from the mouth, neck greatly distended, head drawn to one sides; irregular clenching of fingers, restlessness of hands and feet ; pink, harsh, dusty red nails, eyes, face and skin ; visual aura of jerky, fickle, harsh and dry objects ; non-homologation to the vata causing factors and homologation to the antagonistics of vata - he should be known as being epileptic because of vata. Cs. ni. 8.7. (1)

अभीक्षणमपस्मरन्तं क्षणेन संज्ञां प्रतिलभमानम् अवकूजान्तम् आस्फालयन्तं भूमिं हस्ति हारिद्र ताम्र नख नयन वदन त्वचं रुधिरोक्षितोग्र भैरवादीप्त रुषित रूप दर्शनं पित्तलानुपशयं विपरीतोपशयं पित्तेनापस्मरन्तं विद्यात्।

Frequent epiletic fits but regaining consciousness in a moment; stertorus breathing; tossing about on the ground; green, yellow or coppery coloration of nails, eyes, face and skin; visual aura of blood-smeared, fierce, terrifying, blazing, angry looking forms ; non homologation to *pitta* factors and homologation to the antagonistics of *pitta* - he should be known as being epileptic because of *pitta*. Cs. ni. 8.7. (2)

चिरादपस्मरन्तं चिराच्च संज्ञां प्रतिलभमानं पतन्तम् अनतिविकृत चेष्टम् लालामुद्धमन्तं शुक्ल नख नयन वदन त्वचं शुक्ल गुरु स्निग्ध रुपदर्शिनं श्लेष्मलानुपशयं विपरीतोप शयं च श्लेष्मणा अपस्मरन्तं विद्यात्।

Becoming epileptic slowly and regaining consciousness also slowly; falling on the ground; not accompanied with strong convulsive movements; dribbling of saliva from the mouth; pallor of nails, eyes, face and skin; visual aura of white, heavy and glossy forms; non-homologation to *kapha* causing factors and homologation to the antagonistics for *kapha* - he should be known as being epileptic due to *kapha*. Cs. ni. 8 (3)

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समवेत सर्व लिंगमपस्मारं सान्निपातिकंविद्यात्।

An epilepsy accompanied with the symptoms of all these types should be known as the *synergic* type. This is spoken of as being incurable. Cs. ni. 8 8 (4).

treatment of mental disorders :

88. न ते मनुष्यैः सह संविशन्ति न वा मनुष्यान् क्वचिदाविशन्ति।
येत्वाविशन्तीति वदन्ति मोहात्ते भूत विद्याविषयादपोह्याः।

The spirits (that are assumed by some to be the cause of mental disorders) do not dwell along with the (mental) patients; neither do they ever enter into the (mentally affected) persons. They who tell thus that (the external spirits) enter into the (patients and thus cause mental upsettings) do so because of (their own) confusion. Such people should be totally prevented (lit. pushed. away) from (indulging in) the field of the science of mental diseases Ss. u. 60. 21.

नैव देवा न गन्धर्वा न पिशाचा न राक्षसाः। न चान्ये स्वयमक्लिष्टमुपक्लिश्नन्ति मानवम्।।

Neither the gods nor the *gandharvas* (genie) or the *piśācas* (evil spirits) or the *rākṣasas* (goblins) or any other such spirits enter into the man by themselves and trouble him, when he is himself not troubled (already). Cs. ni. 7.19.

तत्र बुद्धिमता मानस व्याधिपरीतेनापि सता बुद्ध्या हिताहितमवेक्ष्यावेक्ष्य धर्मार्थकामानामहितानामनुपसेवने हितानां चोपसेवने प्रयतितव्यं न हि अन्तरेण लोके त्रयमेतन्मानसं किंचिन्निष्पद्यते सुखं वा दुःखं वा ; तस्मादेत च्चानुष्टेयं-तद्धिानां चोपसेवने प्रयतितव्यम् आत्म देशकुल काल बल शक्तिज्ञाने यथावच्चेति।

Therein, an intelligent person even if afflicted with a mental illness should attempt to give up the unwholesome and take up the wholesome as concerning (his basic three human pursuits of) securing religious merits, economic prosperity and personal desires, scrutinising again and again with his own good faculties (*whatever that is stil remaining*) as to what is wholesome and what is unwholesome. There is nothing other than (the engagements In) these three pursuits (of life) that would result in this world as happiness or grief.

Therefore, he should practice the following : he should attempt to take recourse to experts in the science of treating mental disorders and (simultaneously) understand in its true reality (the limitations and actualities of his perspective as regards) his own self, place, family, times, strength and capabilities. Cs. su. 11.46.

प्रज्ञापराधात् संभूते व्याधौ कर्मज आत्मनः। नाभिशंसेद् बुधो देवान्नपितृनपि राक्षसान्।।
आत्मानमेव मन्येत कर्तारं सुखदुःखयोः। तस्मात् श्रेयस्करं मार्गं प्रतिपद्येत नो त्रसेत्।।

Diseases come about by the acts of wilful offence committed by oneself. A wise person should not doubt (instead, here) either the gods, the manes or the goblins. One should know that oneself is the agent of one's own happiness as well as grief. Therefore one should take resort to the path of auspiciousness and not torment oneself (by other ways). Cs. ni. 7. 21, 22.

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89. शिरस्तालवन्तरगतं सर्वेन्द्रियपरं मनः ।
तत्रस्थं तद्धि विषयानिन्द्रियाणां च रसादिकान् ।
समीपस्थान् विजानाति त्रीन् भावांश्च नियच्छति ।।
सुमनः प्रभवं चापि सर्वेन्द्रियमयं बलम् ।
कारणं सर्व बुद्धीनां चित्तं हृदय संश्रितम् ।।

(*placement and nerves*) The mind which is over lording to all the senses is situated between the head and the palate. Situated therein, that alone understands the objects of the sense organs such as the taste and the like, that are nearby; and, also controls the three states of the mind (the balanced, the passionate and the dull or the *satva*, the *rajas* and the *tamas*). It is this which is the source of well disposedness as welll as *the* strength of all the senses. It is this which is the reason of all understanding and intelligence as well as the faculty of cognising that is situated in the site of knowing (lit. heart). It is this faculty of cognising that is the cause of the activities of all else. Bhela. Ci. 8.2-4

अतीन्द्रयाणां पुनः सत्वादीनां केवलं चेतनावच्छरीरमयन भूतमधिष्ठान भूतं च ।

And, for mind and the like that are beyond the sensory faculties, the entirety of the body serves as the pathway and the substratum as it were. Cs. vi. 617-

कपाले सन्धयः पंच सीमन्तास्तिर्यगूर्ध्वगाः ।
भ्रमोन्माद मनोनाशैस्तेषु विद्धेषु नश्यति ।।

In the cranium, (there are) five joints (the sutures) running obiiquely as well as upwards. (A person) if pierced there will get destroyed by giddiness, insanity and loss of mind. Ahr. sa. 4.35.

चिन्ताज्वरो मनुष्याणां क्षुधां निद्रां बलं हरेत् । रुपमुत्साह बुद्धिं श्रीं जीवितं न संशयः ।।

anxiety, brooding. The fever of anxiety snatches away from persons hunger, sleep, strength, beauty, enthusiasm, intellect, prosperity and even life. There is no doubt about this. Skandapurāṇa.

ज्वरो व्यतीते षडहे जीर्ण ज्वर इहोच्यते । असौ चिन्ताज्वर स्तीव्रः प्रत्यहं नवतां व्रजेत् ।।

A fever, when six days are past is called a spent up fever. But, this acute fever of anxiety gets a novelty every day. Skandapurāṇa.

चिन्तनेनैधते चिन्ता त्विन्धनेनैव पावकः । नश्यन्त्य चिन्तनेनैव विनेन्धनमिवानलः ।।

By constantly brooding over it, anxiety flourishes (for ever) like fire being constantly fed with fuel. It gets destroyed by non-thinking about it, just like a fire when not given any fuel. Yoga vāśiṣṭha.

भैषज्यमेतद् दुःखस्य यदेतन्नानुचिन्तयेत् । चिन्त्यमानं हि न व्येति भूयश्चापि प्रवर्धति ।।

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This is the medicine for grief, namely, the non-thinking about it constantly. By brooding over it, it will not get destroyed. In fact it will flourish further thereby. Mahābhārata.

किमद्य मम सम्पन्नं प्रातर्वा भविता पुनः । इति चिन्ता ज्वरो नास्ति तेन जीवाम्यनामयः ।।

"What is it that I have secured today? What will happen to me again tomorrow morning ?". I do not have this fever of anxiety. By this I live without any disease.

चित्तायत्तं धातुबद्धं शरीरं नष्टे चित्ते धातवो यान्ति नाशम् ।
तस्मात् चित्तं सर्वदा रक्षणीयं स्वस्थे चित्ते धातवः सम्भवन्ति ।।

The body, bound up by its constituents is under the control of mind. When mind is lost the constituents undergo a desturction. Therefore mind should always be protected. If mind is healthy, constituents will come about. Avadhuta gita.

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10. Health, Hygiene and Happiness

a. *definitions*

1. विकारो धातु वैषम्यं साम्यं प्रकृतिरुच्यते। सुख संज्ञकमारोग्यं विकारो दुःखमेव च।।

Disease is imbalance of the constituents. Balance is what is called the natural state (or health, swasthya). Health is the very sign of happiness; any abnormality (vikara) or an upsetting here, is itself unhappiness. Cs. su. 9.4.

2. समदोषः समाग्निश्च समधातुमल क्रियाः। प्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते।।

(One who has) balanced vitiations, balanced digestive capacity, equable activities as concerning his body constituents and impurities and whose soul, sensibilities and mind are gracefully disposed – *he* is designated to be healthy. Ss. su. 15. 41.

शीतोष्णे चैव वायुश्च त्रयः शारीरजा गुणाः। तेषां गुणानां साम्यं यत् तदाहुः स्वास्थ्य लक्षणम्।
सत्वं रजस्तम इति मानसाः स्युस्त्रयो गुणाः। तेषां गुणानां साम्य यत् तदाहुः स्वास्थ्य लक्षणम्।।

Vāta, pitta (the hot) and *kapha* (the cold) are the three qualities born of the body. Whatever it is that represents the equability among their properties is called the characteristic of health. *Sattva, raja* and *tama* – these are the three qualities of the mind. Whatever it is that represent an equability among their properties is called the characteristic of health. Mahabharata.

3. सत्वं रजस्तम श्चेति त्रयः प्रोक्ता महागुणाः। रजस्तमश्च मनसो द्वौ च दोषावुदाहृतौ।।

Sttva, rajas, and *tamas* – these three are called as the great qualities (of the mind). (But among them), it is only *rajas* (or passion) and *tamas* (or dullness) that are illustrated as being vitiative (of the mind). Ast. samg.

सत्वोत्तरं च द्वन्द्वं च मानसामयहेतवः।

The couple (of factors viz. passion and dullness) other than *sattva* (equipoise) are the causes of the mental diseases. Kashyapa samhita.

b. *praise*

4. धन्यानां उत्तमं दाक्ष्यं धनानां उत्तमं श्रुतम्।
लाभानां श्रेष्ठमारोग्यं सुखानां तुष्टिरुत्तमा।।

Ability is the best among the blessed (faculties). Learning is the best among the wealths. Health is the best among the profits. Contentment is the best among the happinesses. Mahabharata.

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5. अर्थागमो नित्यं अरोगिता च
प्रिया च भार्या प्रियवादिनी च।
वश्यश्च पुत्रोऽर्थकरी च विद्या
षड् जीवलोकस्य सुखानि राजन्।।

Constant incoming of money, diseaseless-ness, a beloved wife who also speaks pleasingly, a son who remains under control, a learning which is capable of giving money-these six, O king are happinesses in the world of the human beings. Mahābhārata.

आरोग्यमानृण्यमविप्रवासः
सद्भिर्मनुष्यः सह सम्प्रयोगः।
स्वप्रत्यया वृत्तिरभीत वासः
षड् जीवलोकस्य सुखानि राजन्।।

Health, debtlessness, not living far away from home for livelihood, coming into association with the good people, a profession which is according to one's own liking, and a living without any fear - these six, O king are happinesses in the world of the human beings. Mahābhārata.

6. आरोग्यं विद्वत्ता सज्जन मैत्री महाकुले जन्म। स्वाधीनता च पुंसा महदैश्वर्यं विनाज्यर्थैः।।

Health, learning, friendship with the good, birth in a great family and self-dependence - these constitute for a person a great wealth, without money. Śarngadhara paddhati.

7. धर्मार्थ काम मोक्षणां शरीरं साधनं यतः। अतो रुग्भ्यस्तनुं रक्षेन्नरः कर्म विपाक विद्।।

It is because (this) body is the means for securing religious merit, economic prosperity, personal desires as well as the final emancipation, a person who understands the ultimate effect of (one's own) deeds should protect it from diseases. Śarngadhara

8. पुराभिमानो न वृथा तद्दाढर्येन विना कथम्।
चित्त स्वास्थ्यं विना तच्च शिव भक्तिः दृढा कथम्।।

Pride in the health of one's own self is not useless. If this (helath) is not steady and firm, how can there be peace of mind and without this (peace of mind) how can there be an enduring devotion to God. Jivānanda.

9. सर्वमेव परित्यज्य शरीरमनुपालयेत्। शरीरस्य प्रणष्टस्य सर्वमेव विनश्यति।।

One should nurture one's health, giving up everything. (For,) if the body gets destroyed, everything whatsoever is lost. Cāṇakya.

10. दानं धर्मश्च विद्या च रूपं शीलं कुलं तथा। सुखमायुर्यशश्चैव नव गोप्यानि यत्नतः।।

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(The tendency of) giving gifts, (the interest in) doing *dharma*, the learning (that one already possesses), the beauty (of one's own body), (one's) conduct, (the prestige of one's) family, (the) happiness (one is enjoying), the span of life (and the health therefore) and (one's) fame - these seven should be kept protected with effort. Canakya.

11. शरीरमेव आयतनं सुखस्य दुःखस्य चाप्यायतनं शरीरम्।
यद्यत् शरीरेण करोति कर्म तेनैव देही समुपाश्नुते तत्।।

Body alone is the abode of happiness and so also even for the grief, it is the body alone that is the abode. Whatever work a person performs with his body, he secures the result thereof (viz. happiness or grief) in accordance with it. Subhasitavali.

12. आत्मानमेव मन्येत कर्तारं सुखदुःखयोः। तस्मात् श्रेयस्करं मार्गं प्रतिपद्येत न त्रसेत्।।

One should consider oneself as the agent of (one's own) happiness or grief. Therefore one should take recourse to a path that is auspicious. There will be no need to fear then. Caraka

13. धर्मार्थकाममोक्षाणां आरोग्यं मूलमुत्तमम्।

Health is the most excellent source for (securing) religious merit (*dharma*); material prosperity, personal desires and the final liberation. Cs. su. 1.15

c. *rectitude and health*

14. सतामुपासनं सम्यगसतां परिवर्जनम्। व्रतचर्योपवासौ च नियमाश्च पृथग्विधाः।।
धारणं धर्मशास्त्राणां विज्ञानं विजने रतिः। विषयेषु अरतिः मोक्षे व्यवसायः परा धृतिः।।
कर्मणामसमारम्भः कृतानां च परिक्षयः। नैष्कर्ममनहंकारः संयोगे भय दर्शनम्।।
मनौ बुद्धि समाधानम् अर्थतत्व परीक्षणम्। तत्व स्मृतेरुपस्थानात् सर्वमेतत् प्रवर्तते।।

Serving the good (people) properly and abandoning the bad; activities of vow and fasting, and the (following of the) various kinds of the (religious) regulations, compliance to the knowledge of the treatises on Dharma; (taking) pleasure in solitude; (having a) disinterest in material objectives; strenuous effort in (securing) liberation; great resoluteness; non-undertaking of the activities, and a decaying down of what has been taken up; actionlessness, non-ego and a seeing of fear (whenever there is a chance of) attachment and engagement; a quietitude and restrainedness of the mind and the intellect - all of these will issue forth when there is the presence of proper understanding and reminiscence. Cs. sa. 143-146.

15. वक्ष्यन्ते कारणान्यष्टौ स्मृतिर्यैरूपजायते। निमित्तरूपग्रहणात् सादृश्यात् सविपर्ययात्।।
सत्वानु बन्धादभ्यासात् ज्ञान योगात् पुनः श्रुतात्। दृष्ट श्रुतानु भूतानां स्मरणात् स्मृतिरुच्यते।।

They speak of the eight reasons by which a correct remembrance or reminiscence arises: by comprehending the correct reason and form (of the situation concerned), by understanding the analogy and the alternatives (thereof), by

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employing the mind to grasp the essence (therein), repeated practice and *jnānayoga* (viz. the yoking of the mind to knowledge) or by hearing again what is heard already. Remembering what has been seen, heard or experienced already is called memory. Cs. sa.1.148-149.

16. लोभमोहभियां तृष्णा चिन्तयोर्मद मानयोः।
शौर्यस्य च तथा विद्वन् प्राप्तं वेगं विधारयेत्।।
एतद्धरयतो ह्यास्य बलमायुश्च वर्धते।

A learned man should (not give vent to but) control the urges (that are about to erupt out) concerning greed, infatuation and fear, as well as those of thirst or craving after and brooding or of arrogance and prestige or of bravery. By warding of these (urges), his strength and span of life will both increase. Bhela su. 6.8,9.

17. त्रय उपस्तम्भा इति-आहारः स्वप्नो ब्रह्मचर्यमिति एभिस्त्रिभिर्युक्तियुक्तैरुपस्तब्धमुपस्तम्भैः शरीरं बलवर्णोपचयोपचितमनुवर्तते यावदायुः संस्कारात् संस्कारम् अहितम् अनुपसेवमानस्य य इहैव उपदेक्ष्यते।

Three are the secondary pillars (to health): food, sleep and celibacy. The body becomes fully supported secondarily by these three measures, properly employed. (Thus supported, it) remains in proper form as long as one's span of life lasts, prospering with the strength, colour and metabolic nourishment by (proper) upkeep. This upkeep is: the non-taking of what is unwholesome (to these three viz., food, sleep and celibacy). What this (*in turn*) is, being taught here itself (as follows:) Cs. su. 11.35.

18. त्रिविधं बलमिति-सहजं कालजं युक्तिकृतं च। सहजं यत् शरीर सत्वयोः प्राकृतं कालकृतमृतुविभागजं वयः कृतं च युक्तिकृतं पुनस्तत् यदाहार चेष्टायोगजम्।

Strength (in the body) is of three types: innate, temporal and strategic. Innate is what is natural to the body and the mind. Temporal is what is due to the (effect of the) divisions of the seasons as well as the factor of age. Strategic is that strength which is born due to the combination of the food and the activity (for e.g. occupational, as in a blacksmith or behavioural as in what is brought about by the physical exercises). Cs. su. 11.36.

d. *the signs and the means of health*

19. आरोग्यं दोष समता सर्वाबाधनिवर्तनम्। तदर्थमृषयः पुण्यमायुर्वेदमधीयते।।
रसायनानि विधिवत्तदर्थं च उपयुंजते। धर्मार्थकाममोक्षाणामवाप्तिश्च तदाश्रया।।
तदात्मवान् तदर्थाय प्रयतेत विचक्षणः।

Health is equanimity among the vitiations (and) a turning away or reversing of all kinds of distresses. It is to secure this, the sages study the holy science of Ayurveda. They make use of the various kinds of the elixirs as prescribed for this purpose. The securing of *dharma* or the religious merit, economic prosperity, personal desires as well as the final emancipation rests on this (health). That is why any skilful man who understands what is good for onself, should take efforts to secure it. Ks. Khila 5. 4,5.

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20. अन्नाभिलाषो भुक्तस्य परिपाकः सुखेन च।।
सृष्टविण्मूत्रवातत्वं शरीरस्य लाघवम्। सुख स्वप्नप्रबोधनम् बलवर्णायुषां
लाभः सौमनस्यं समाग्निता। विद्यादारोग्यलिंगानि विपरीते विपर्ययम्।।

(*the signs of health* :) Desire for food, comfortable assimilation of the food eaten; discharge of faeces, urine and flatus; lightness of the body; very favourably disposed sensory abilities; easy sleep and easy waking up; attaintment of (good) strength, complexion and span of life; cheerfulness of mind and equitable digestive capability – these should be known as the signs of health; if health is altered, these (signs) will also get altered (suitably). Ks. Khila, 5. 6,8.

e. *health as a sign of proper metabolism*

21. दोषः प्रकुपितो धातून् क्षपयत्यात्मतेजसा। इद्धः स्वतेजसावहिनः उखागतमिवोदकम्।।
वैलक्षण्यात् शरीराणाम् अस्थायित्वात् तथैव च। दोष धातुमलानां तु परिमाणं न विद्यते।।
एषां समत्वं यच्चापि भिषग्भिरवधार्यते। न तत् स्वास्थ्यादृते शक्यं वक्तुमन्येन हेतुना।।
दोषादीनां तु असमतां अनुमानेन लक्षयेत्। अप्रसन्नेन्द्रियं वीक्ष्य पुरुषं कुशलो भिषक्।।

A provoked vitiation wears down the body constituents by its own ardour, just as the enkindled fire (wears down) the water in a boiler by its own energy. There is nothing like an (absolute optimal) proportion (*as applicable to all individuals*) as regards the vitiations, the body constituents and the impurities; (*this is because of*) the uniqueness (*of every individual*) and the dynamics (*lit. unsettledness*) of the body. Whatever it is that a physician understands by an equanimity among these, it is not possible to speak about it other than by the (fact of) health as being the (underlying) cause. (That is why), a skilful physician should discern the unequability of the vitiations and the like by inference, after seeing the person (*of the patient*) ill disposed in his sensibilities. Ss. su. 15. 36–39.

f. *the cause of ill health–wilful transgression*

22. धी धृति स्मृति विभ्रष्टः कर्म यत् कुरुतेऽशुभम्। प्रज्ञापराधं तं विद्यात् सर्वदोषप्रकोपणम्।।

What inauspicious action does (a person) deviant in intellect, will and memory performs, *that* is to be known as a wilful transgression: (and, this is what is the cause of) the provocation of all morbidity.

23. उदीरणं गतिमतां उदीर्णानां च निग्रहः। सेवनं साहसानां च नारीणां च अति सेवनम्।।
कर्मकालातिपातश्च मिथ्यारम्भश्च कर्मणां। विनयाचारलोपश्च पूज्यानाम् च अभिधर्षणम्।।
ज्ञातानां स्वयमर्थानामहितानां निषेवणम्। परमौन्मादिकानां च प्रत्ययानां निषेवणम्।।
अकाल देश संचारौ मैत्री संक्लिष्टकर्मभिः। इन्द्रियोपक्रमोक्तस्य सदवृत्तस्य च वर्जनम्।।
ईर्ष्या मान भय क्रोध लोभ मोहमद भ्रमाः। तज्जं वा कर्म यत् क्लिष्टं क्लिष्टं यद्देह कर्म च।।
यच्चान्यदीदृशं कर्म रजोमोह समुत्थितम्। प्रज्ञापराधं तं शिष्टा ब्रुवतो व्याधिकारणम्।।
बुद्ध्या विषमविज्ञानं विषमं च प्रवर्तनम्। प्रज्ञापराधं जानीयात् मनसो गोचरं हि तत्।।

(*details* :) Forceful expulsion of (the natural urges of emesis, etc.) that have started getting formed (but not yet come to the level of release) and, (similarly)

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the restraining of (the urges) that have reached the point of expulsion; adventuresomeness; too much of indulgence in the ladies; medicative measures (e.g. of the *panca karma*) taken after the (proper) time is past or, a wrongful commencement of them; omission in (matters of) humility and conduct; insulting the worthy; practising the unwholesome objectives even though (their ill effects) are known to oneself; practising the acts that cause insanity greatly; untimely wandering about in unfit places; friendship with those who do wicked deeds; giving up the good conduct as told in the (chapter on) engagement of the senses; jealousy, pride, fear, anger, greed, infatuation, intoxication and delusion; the doing of a wicked deed under their influence, or, a wicked deed of the body or any other similar deed born out of passion or infatuation - the learned and the cultured speak of them all as willful transgression: the reason of the disease.

To understand and engage oneself wrongly, knowing (fully well that it is all wrong to do so) - this is to be known as wilful transgression. This is really known to the mind (as wrongful, and still is indulged in). Ca. sa.1.98-109.

24. प्रज्ञा-कालत्रयार्थप्रतिभासिनी काल त्रयात्मिका बुद्धिः ।
प्रज्ञापराध-(एतत्) प्रज्ञा प्रमाद जन्यं कर्म
कायवाङ् मनोभेदेन त्रिविधमप्यहितं कर्म प्रज्ञापराधः ।

(pragna) - discrimination. This is the intellect constituted by (the understanding of) the triad of the times (past, present and future) and illuminating the meaning of this triad of the times. Da. Ss. su. 35.16.

A wilful offence is an unwholesome act due to an error in discrimination; (this is) of three kinds, because of the differences such as the error (in the acts) of the body, the speech and the mind. Cs. ni.1.3

धीधृतिस्मृतिविभ्रष्टः कर्म यत् कुरुतेऽशुभम्। प्रज्ञापराधं तं विद्यात् सर्वदोष प्रकोपणम्।।

The non good act that a person does, deviating in intellect, courage and retentivity is to be known as a wilful offence; this is what provokes all kinds of vitiations. Cs.sa. 1.102.

g. *personal hygiene, a general note*

25. द्वे अधः सप्त शिरसि खानि स्वेदमुखानि च। मलायनानि बाध्यन्ते दुष्टैर्मात्राधिकैर्मलैः।।
मलवृद्धिं गुरुतया लाघवात् मल संक्षयम्। मलायनानां बुद्ध्येत संगोत्सर्गादतीव च।।
तान् दोषलिंगैरादिश्य व्याधीन् साध्यानुपाचरेत्। व्याधि हेतु प्रतिद्वन्द्वैर्मात्रा कालौ विचारयन्।।

Two below; seven in the head and the (many) orifices at the sweat openings - these (outlets constituting the) receptacles of impurity get troubled by the formation of vitiated excretory products in measures that are in excess (to normalcy). Excess of impurity is to be known by the heaviness of the receptacle concerned and scantiness, by the lightness (of the latter) and also by the sticking together of the discharge or the excessiveness of the discharge respectively. Diagnosing these disorders by their characteristic symptoms and morbidity (as noted above) the physician should treat the curable diseases by remedies which are antagonistic to the disease (concerned) and their causative factors with due consideration of dose and time (of administration). Cs. su. 7.42-44.

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विषमस्वस्थवृत्तानामेते रोगास्तथापरे। जायन्तेऽनातुरः तस्मात् स्वस्थवृत्तपरो भवेत्।

These (viz., diseases due to excess or decline in the quantity of the impurities) and yet other diseases arise in those (persons) that act contrary to healthful living. A healthy man should be ever vigilant in following the rules of health. Ca. su. 7.45.

26. स्निग्धस्विन्नशरीराणामूर्ध्वं चाधश्च नित्यशः। बस्तिकर्म ततः कुर्यात् नस्य कर्म च बुद्धिमान्।।
यथाक्रमं यथायोगमत ऊर्ध्वं प्रयोजयेत्। रसायनानि सिद्धानि वृष्ययोगांश्च कालवित्।।
रोगस्तया न जायन्ते प्रकृतिस्थेषु धातुषु। धातवश्च अभिवर्धन्ते जरा मान्द्यमुपैति च।।

(*A general guidance for treatment of endogenous diseases*) The intelligent physician should, after preliminary preparation of the body with the oleation and sudation carry out the purificatory procedures of vomition, purgation, enemata and errhines according to the season. Therefore the physician skilled in the science of climatology should administer alternative and virilific remedies of tested efficacy systematically and as indicated. Thus the body elements being restored to the normal state, susceptibility to disease disappears, the body elements would get aggrandised and the pace of age, slackened. Cs. su. 7. 47-49.

27. विधिरेष विकाराणामनुत्पत्तौ निदर्शितः। निजानां इतरेषां तु पृथगेव उपदेक्ष्यते।

This is the methodology that is prescribed for the very non-birth of the diseases of the in-born type (viz. born in the body itself by its own functionings and not induced by an extraneous cause - *āgantuka*). The others will be taught separately. Cs. su. 7.50.

h. *habits - acquirement and withdrawal:*

28. उचितादहितात् धीमान् क्रमशो विरमेन्नरः। हितं क्रमेण सेवेत क्रमश्च अत्र उपदिश्यते।।
प्रक्षेपापचयं ताभ्यां क्रमः पादांशिको भवेत्। एकान्तरं ततश्च ऊर्ध्वं द्व्यन्तरं त्र्यन्तरं तथा।।

The wise person should gradually desist from the unwholesome if he has become already habituated with it, (and in its place) take recourse to the wholesome (also) gradually. The course for this (gradual withdrawal and acquirement) is being taught here: In acquiring (of the wholesome) and withdrawal (from the unwholesome), the method should be of a quarter amount. In this course there is an interval of one (day, for e.g.) first, then, of two (days) and afterwards three (days). Cs. Ss. 7.36-37.

क्रमेण अपचिता दोषाः क्रमेण उपचिता गुणाः। सन्तो यान्ति अपुनर्भवम् अप्रकंप्या भवन्ति च।।

The addictions that are removed gradually and the good qualities acquired gradually become (respectively) non-recurring and unshakably established. Cs. su. 7.38.

i. *health measures - a guide line*

29. तदात्वे च अनुबन्धे वा यस्य स्यादशुभम् फलम्। कर्मणस्तन्न कर्तव्यं एतद् बुद्धिमतां मतम्।।

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One ought not to engage in an action which either in the doing or in the consequence, gives rise to evil. Such is the view of the wise. Ca. vi. 3.46.

health measures - specific details

30. शरीराचेष्टा या चेष्टा स्थैर्यार्था बलवर्धनी। देह व्यायाम संख्याता मात्रया तां समाचरेत्।।
लाघवं कर्म सामर्थ्यं स्थैर्य दुःखसहिष्णुता दोषक्षयोऽग्नि वृद्धिश्च व्यायामादुपजायते।।
श्रमः क्लमः क्षयस्तृष्णा रक्तपित्तं प्रतामकः। अति व्यायामतः कासो ज्वरश्छर्दिश्च जायते।।
स्वेदागमः श्वासवृद्धिः मात्राणां लाघवं तथा। हृदयाद्युपरोधश्च इति व्यायामलक्षणम्।।

(*physical exercises* :) That activity of the body which is likeable and is meant to increase its firmness and strength is regarded as an exercise of the body (the physical exercise). This should be practised in the right measure. Lightness, capacity for work, firmness, tolerance of hardship, subsidence of vitiation and stimulation of gastric fire ensue from physical exercises. Fatigue, exhaustion, wasting (of the body), thirst, hemothermia, asthmatic cough, fever and vomiting result from over-exercise. The onset of perspiration, increased respiration as well as lightness of limbs and a (slight) feeling of oppression at the cardiac region indicate (the proper measure of) physical exercise. Cs. su. 7.31-33 (1)

31. व्यायाम हास्य भाष्य अध्वग्राम्यधर्म प्रजागरान्। नोचितानपि सेवेत बुद्धिमानतिमात्रया।।
एतान् एवं विधांश्च अन्यान् योऽतिमात्रं निषेवते। गजं सिंहं ह्वाकर्षन् सहसा विनश्यति।।
अरोगी जीर्ण भक्तश्च नरो व्यायाममाचरेत्। नाति पीडा करो देहे।

The wiseman should not indulge in an excess of (the following:) physical exercise, laughter, speaking, walking, sex act, waking at night, even if he is habituated to such practices. He who indulges in these and similar other activities in an excess measure gets destroyed immediately like a lion trying to draw an elephant. Cs. su. 7.34,35.

(Only) a person, who is free from disease and has his (previous) food (fully) digested should take to physical exercise and (do so) in such a way as not to torment the body excessively. Carakopaskara.

32. अति व्यवाय भाराध्वकर्मभिश्च अतिकर्शितः। क्रोध शोकभयायासैः क्रान्ता ये चापि मानवाः।।
बाल वृद्धप्रवाताश्च ये च उच्चैर्बहु भाषकाः। ते वर्जयेः व्यायामं क्षुदिता स्तृषिताश्च ये।।

Those who are emaciated due to excessive indulgence in sex-act, load carrying or wayfaring, those who are afflicted with anger, grief, fear and toil, those who are of tender age or advanced in age or of *vāta* habitus, those who are given to loud and plentiful talk as well as those who are hungry or thirsty should avoid physical exercise. Cs. su. 7.35. 1,2.

सर्वेषुऋतुषु अहरहः पुम्भिरात्म हितैषिभिः। बलस्यार्धेन कर्तव्यो व्यायामो हन्यतेऽन्यथा।
हृदिस्थान स्थितो वायुः यदा वक्त्रं प्रपद्यते। व्यायामं कुर्वतो जन्तोस्तद्बलार्धस्य लक्षणम्।।

In all seasons and evey day, physical exercises should be practised by men who desire their own welfare. These physical exercises should be carried out with half of one's strength (only); otherwise, they (themselves) will destroy (a person). A person who practises exercises till when the breath situated at the chest (lit. heart)

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enters his mouth (viz., when he starts breathing hard, or is almost gasping), that should be known as (indicative of) his half of the strength (viz. he should stop forthwith). Su. ci. 24. 46-48.

कक्षा ललाट नासासु हस्तपादादिसन्धिषु। प्रस्वेदात् मुख शोषात् च बलार्द्धं तद्धि निर्दिशेत्।।

Recognition of the half-strength (of a person, and indicative of stopping further physical exercises):

One should designate that as the half-strength (of a person), when there is an excess of sweating out at the arm-pit, fore-head and the joints of the hand and the leg or there is a dryness or dessication of the mouth. Ss

33. शरीरायासजननं कर्म व्यायाम संज्ञितम्।

A work that brings about fatigue in body is considered the physical exercise. Su. ci. 24.38

34. सर्वेष्वृतुष्वहरहः पुम्भिरात्म हितैषिभिः। बलस्यार्धेन कर्तव्यो व्यायामो हन्यतोऽन्यथा।।
हृदिस्थानस्थितो वायुः यदा वक्त्रं प्रपद्यते। व्यायामं कुर्वतो जन्तोस्तद्बलार्धस्य लक्षणम्।।

By persons desirous of their own welfare, physical exercises should be carried out every day and in all seasons, with half of their bodily strength. Otherwise this would be destructive. When the air situated at the cardiac region (chest) enters the mouth (i.e. when one starts breathing through mouth i.e. gasps) as one is carrying out a physical exercise, that is the sign of half the strength (and, a sign to stop further execises). Ss. ci. 24.46-48.

35. कक्षाललाट नासासु हस्त पादादिसन्धिषु।
प्रस्वेदान्मुखशोषाच्च बलार्धं तद्धि निर्दिशेत्।

The sweating out at the armpits and the forehead as well as the joints of the hand and the feet, and the dryness of the face - these indicate what is half-strength Ss. ci. 24. 48 (*another reading*)

36. शरीरोपचयः कान्तिर्मात्राणां सुविभक्तता। दीप्ताग्नित्वं अनालस्यं स्थिरत्वं लाघवं मृजा श्रमक्लम पिपासोष्ण शीतादीनां सहिष्णुता। आरोग्यं चापि परमं व्यायामादुपजायते।। न चास्ति सदृशं तेन किंचित् स्थौल्यापकर्षणम्। न च व्यायामिनं मर्त्यं मर्दयन्त्यरयो बलात्।। न चैनं सहसा आक्रम्य जरा समधिरोहति। स्थिरी भवति मांसं च व्यायामाभिरतस्य च।। व्यायाम स्विन्नगात्रस्य पद्भ्यामुद्वर्तितस्य च। व्याधयो नोपसर्पन्ति सिंहं क्षुद्रमृगा इव।। वयोरूपगुणैर्हीनमपि कुर्यात् सुदर्शनम्। व्यायामं कुर्वतो नित्यं विरुद्धमपि भोजनम्।। विदग्धं अविदग्धं वा निर्दोषं परिपच्यते।

Well formedness of the body, lustre, firm demarcation of the bodily parts; stimulated digestive fire, absence of laziness; firmness and stability, lightness, clear complexion; tolerance to fatigue, weariness, thirst, heat, cold and the like, and great health follow from physical exercise. There is nothing similar to it in removing away the stoutness. Enemies do not trouble a person indulging in physical exercises, by sheer fright. Nor does old age suddenly conquer him and overpower. The flesh

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becomes firm for a person engaged in physical exercises. Diseases do not come anywhere near a person whose body is stamped and practised with physical exercises and who is bubbling up and bursting forth even from his very feet (in the vigour due to these exercises); they shun him as the lesser beasts shun a lion. Even if he is deficient in age, form and qualities, he will be rendered good looking, if he indulges in physical exercises daily. The food, even if it is antagonistic or whether it is digested or not, becomes completely assimilated without leaving any blemishes. Ss. ci. 24. 39-45.

37. व्यायामो सदा पथ्यो बलिनं स्निग्ध भोजिनां। स च शीते वसंते च तेषां पथ्यतमः स्मृतः।।

Physical exercises are always wholesome to the strong and those who take unctuous food. They are most wholesome for them in cold season and spring. Ss. ci. 24.

38. अरोगी जीर्ण भक्तश्च नरो व्यायाममाचरेत्। नाति पीडाकरो देहे बलवान् श्लैष्मिके गदे।।
व्यायामोष्ण शरीरत्वात् स्वेदात् च प्रविलापिते। श्लेष्मणि श्लैष्मिका रोगा न भवन्ति शरीरिणः।
अजीर्णनस्तु आमरसौ व्यायामेन आकुलीकृतः। देहं विसर्पन् जनयेत् रक्तपित्तमयान् गदान्।।

A person with no diseases and after the food is fully digested should do physical exercises. In diseases of *śleṣma* in the body, a strong person should do exercises that would not torment (i.e. tire) him much. In persons of *śleṣma*, *śleṣmic* diseases do not come about because of the heat in the body (released) due to exercises and the complete absorption (thereby) owing to sweating. For persons of indigestion, distressed by exercises, the undigested food spreading all over the body generates diseases of plethora. Carakposkara.

39. रक्तपित्ती कृशः शोषी श्वासकासक्षतातुरः। भुक्तवान् स्त्रीषु च क्षीणो भ्रमार्तश्च विसर्जयेत्।।

A plethoric patient, the lean and the dessicated; a patient of breathing dificulty, cough and lesions; he who has just enjoyed a woman; the declining, or one who is troubled by giddiness - these persons should give up physical exercises. Su. ci. 24. 50,51.

40. वातपित्तामयी बालो वृद्धोऽजीर्णी च तं त्यजेत्।

The patient with the diseases of *vāta* and *pitta*, the very young, the very old and the person of undigested food - these should give up physical exercises. Va. ah. su. 2.

श्रमः क्लमः क्षयस्तृष्णा रक्तपित्तं प्रतामकः। अतिव्यायामतः कासो ज्वरश्छर्दिश्च जायते।।

Fatigue, weariness, decline (of the constitutents of *rasa* and the like of the body), excessive thirst, plethora, *pratāmaka* asthma, fever, and vomit arise by excessive physical exercises. Cs. su.7.33.

j. ***seasonal regimen for health***

(effect of climate on the health)

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41. अल्पोदकद्रुमो यस्तु प्रवातः प्रचुरातपः । ज्ञेयः स जांगलो देशः स्वल्परोगतमोऽपि च ।।
प्रचुरोदकवृक्षो यो निवातो दुर्लभातपः ।। अनूपो बहुदोषश्च समः साधारणो मतः ।।

(*geographical medicine* :) That is to be known as the jungle country which has scanty rainfall and vegetation and is swept by high winds and enjoys abundant sunshine. And, this is the least unhealthy. That country which has abundant rain and luxurious vegetation, no winds and scarce sunshine is considered an *ānupa* country or a wetland. This gives rise to many morbidities. Where these extremes are balanced, that country is known as normal. Ca. vi. 3. 47,48.

42. इह तु वर्षा शरद्धेमन्तवसन्तग्रीष्म प्रावृषः षड्ऋतवो भवन्ति
दोषोपचय प्रकोपोपशमनिमित्तं ।

Now there occur six seasons viz., rainy season (*varṣā*), autumn (*śarad*), winter (*hemanta*), spring (*vasanta*), summer (*grīṣma*) and wet season *(prāvṛṣa)* that (act as) imminent causes for a consolidation, provocation and alleviation of the vitiations. Ss. su. 6.10.

तत्र वर्षा हेमन्त ग्रीष्मेषु संचितानां दोषाणां शरद्वसन्त प्रावृट्सु च प्रकुपितानां निर्हरणं कर्तव्यम् ।

Therein one should remove out the vitiation consolidated in *varṣā, hemanta* and *grīṣma* and provocated during *śarad, vasanta* and *pravṛt*. Ss. su. 6.12.

तत्र पैत्तिकानां व्याधीनामुपशमो हेमन्ते श्लैष्मिकाणां निदाघे वातिकानां शरदि स्वभावत एव ।

Therein, the alleviation of the *pitta* diseases is in *hemanta*, of the *śleṣma* in *nidāgha*, of the *vāta* in *sarat* – (this happens) naturally itself. Ss. su. 6.13.

यस्मिन् यस्मिन् ऋतौ ये ये दोषाः कुप्यन्ति देहिनाम् । तेषु तेषु प्रदातव्याः रसास्तेते विजानता ।।
ऋतावृतौ य एतेन विधिना वर्तते नरः । घोरानृतुकृतान् रोगान् नाप्नोति स कदाचन ।।

In whatever particular season whatever particular vitiations get provoked in persons, the specific *rasas* required for the purpose (under these circumstances) are to be given, by the knowledgeable physician. Ss. cu. 64.5

He who abides by this method of seasonal regimen, he will never get the terrible diseases caused by the seasonal effects. Ss. u. 64.55.

k. *a daily regimen for health* Ahr. su. 2

43. ब्राह्मे मुहूर्त्त उत्तिष्ठेत् स्वस्थो रक्षार्थमायुषः ।

A healthy person should get up in the *Brahmi muhurta* (early in the morning, at about 3.30 – 4.30 AM) so as to protect his own span of life.

शरीर चिन्तां निर्वर्त्य कृतशौचविधिस्ततः ।

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After considering well the state of his own body (specially, if the previous food is well digested or not) one should then carry out the procedures of cleaning oneself.

(Then follows the measures of daily toileting, cleaning the teeth, applying collyrium, and errhines and so on, daily bath, application of oil, physical exercises, etc. and massaging)

(*head bath*)

अभ्यंगमाचरेन्नित्यं स जरा श्रमवातहा। दृष्टिप्रसाद पुष्ट्यायुः स्वप्नसुत्वक्त्वदार्ढयकृत्।

One should practice head bath (with oil massaging) daily; this removes old age, fatigue and *vata* vitiation and confers clarity of vision, nourishment of the body, increased span of life, good sleep and renders the skin good looking and non-hard. 8

लाघवं कर्म सामर्थ्यं दीप्तोऽग्निः मेदसः क्षयः। विभक्तघनगात्रत्वं व्यायामादुपजायते।।

(*physical exercise*): Lightness of the body, ability to do work, a stimulated digestive capacity, decline of the fat, clearly demarcated and solid body – (these) arise from physical exercises. 10.

तं कृत्वा अनुसुखं देहं मर्दयेच्च समन्ततः।

After doing the physical exercise, one should massage the body all around in accordance with one's (own) pleasure. 12.

उद्वर्तनं कफहरं मेदसः प्रविलायनम्। स्थिरीकरणमंगानां त्वक् प्रसादकरं परम्।।

Massaging removes *kapha* vitiation, dissolves the fat, stabilises the body and is the best (means) in rendering the skin graceful.

दीपनं वृष्यमायुष्यं स्नानमूर्जाबलप्रदम्। कण्डूमल श्रमस्वेद तन्द्रा तृड् दाह पाप्मजित्।।

Bathing is stimulative, virilifying, life-conferring, a giver of vitality and strength and the conquerer of itching, impurity, fatigue, sweating, lassitude, thirst, the sense of burning and the feeling of sin. 16.

सुखार्थाः सर्वभूतानां मताः सर्वा प्रवृत्तयः। सुखं च न विना धर्मात् तस्मात् धर्मपरो भवेत्।।

(*dharma as the means of health*): All activities of all beings are meant to secure happiness. And that happiness will not come about without dharma. Therefore one should become intent on doing dharma. 20.

भक्त्या कल्याणमित्राणि सेवेत इतर दूरगः।

One should cherish and frequently visit a friend who does good to oneself; and be away at a distance from the contrary. 21.

हिंसा स्तेयान्यथाकामं पैशुन्यं परुषानृते। सम्भिन्नालापं व्यापादमभिध्यां दृग् विपर्ययम्।।
पापं कर्मेति दशाधा काय वाड.भानसैस्त्यजेत्।

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Violence, stealing, unnatural lust, backbiting, harshness, telling lies, idle talk, intention of hurting others, intolerance to other's prosperity, wrongful viewpoint – these are the ten acts of sin; of the body, the speech and the mind. One should abandon them. 21-22.

अवृत्ति व्याधिशोकार्तान् अनुवर्तेत शक्तितः । आत्मवत् सततं पश्येदपि कीटपिपीलकम् ।।

One should assist upto one's capacity those who do not have any means of livelihood and those who are afflicted with disease and grief. One should consider even the lowliest like the insect and the ants like oneself. 23

अर्चयेद् देव गोविप्र वृद्धवैद्यनृपातिथीन् । विमुखान्नार्थितः कुर्यान्नावमन्येत नाक्षिपेत् ।।

One should worship the gods, the cow, the brahmin, the elderly, the physician, the king and the guest. One should not turn away the person who comes for help; one should not disrespect him or object. 24.

उपकारप्रधानः स्यादपकारपरेऽप्यरौ । सम्पद्विपत्सु एकमना हेतावीर्ष्येत् फले न तु ।।

One should consider the help he has received from somebody as very good and one should mostly try to help even an enemy. One should have the same attitude in prosperity as well as calamity. One should grudge the reason (for the other's prosperity) and not the fruit (of the prosperity) itself. 25.

काले हितं मितं ब्रूयादविसंवादि पेशलम् । पूर्वाभिभाषी सुमुखः सुशीलः करुणामृदुः ।।
नैकः सुखी न सर्वत्र विश्रब्धो न च शंकितः । न कांचिदात्मनः शत्रुं नात्मानं कस्यचिद् रिपुम् ।।
प्रकाशयेन्नापमानं न च निः स्नेहतां प्रभोः ।

One should talk in time what is wholesome, within limits, non-argumentative, sweet and charming. One should talk before hand itself (and not wait for the others to start the conversation), be pleasant faced, good in conduct, kindly and soft; one should not be happy all alone, or always upset everywhere or suspicious. One should never indicate to others that such a person is one's enemy or oneself is an enemy to some particular person. One should not advertise one's own discomfiture or the master's absence of friendliness. 26,27.

न पीडयेदिन्द्रियाणि न चैतान्यतिलालयेत् ।

One should not torment (by suppression) one's own sense organs; nor should he indulge in them too much. 29.

त्रिवर्ग शून्यं नारम्भं भेजत्तं च अविबोधयन् । अनुयायात् प्रतिपदं सर्व धर्मेषु मध्यमाम् ।।

One should not commence anything which is valueless in terms of the three pursuits (of human life-religious merit, economic prosperity or personal desire); and one should indulge in them in such a way as to be mutually non-contradictory. One should take up the golden mean in every step. 30.

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आर्दसन्तानता त्यागः कायवाक् चेतसां दमः । स्वार्थबुद्धिः परार्थेषु पर्याप्तमिति सद्व्रतम् ।।

Uniterrupted sympathy and kindliness, (habitual) giving of gifts restraint in the (evil urges of) the body, the speech and the mind; taking interest in other's works as if they are one's own - these (four) are enough to what amounts to good conduct. 46.

नक्तं दिनानि मे यान्ति कथम्भूतस्य सम्प्रति। दुःख भाग् न भवत्येवं नित्यं सन्निहित स्मृतिः ।।

How is my life getting on now - (every) day and night - he who keeps ever vigilant in considering this objective always - he will never come to grief. 47.

इत्याचारः समासेन यं प्राप्नोति समाचरन्। आयुरारोग्यमैश्वर्यं यशो लोकांश्च शाश्वतान् ।।

This in brief is good conduct, by following which one secures (an extended) span of life, health and prosperity, fame and the eternal worlds (of the heaven). 48.

44. आपोथिताग्रं द्वौ कालौ कषाय कटुतिक्तकम्। भक्षयेत् दन्त पवनं दन्तमांसान्यबाधयन् ।।
निहन्ति गन्ध वैरस्यं जिह्वादन्तास्यजम् मलम्। निष्कृष्य रुचिमाधत्ते सद्यो दन्तविशोधनम् ।।

(*oral hygiene* :) A green tooth twig crushed at the proximal end and of astringent, pungent or bitter taste should be chewed twice a day (evening and morning - Cakara.) without injuring the gums. Teeth-cleaning dispels oral fetor and dysgeusia, and promptly induces appetite by removing the impurities of the tongue, the teeth and the mouth. Cs. su. 5., 71,72.

सुवर्ण रूप्यताम्राणि त्रपुरीतमयानि च। जिह्वा निर्लेखनानि स्युः अतीक्ष्णान्यनृजूनि च। जिह्वामूलगतं यच्च मल मुच्छ्वासरोधि च। दौर्गन्ध्यं भजते तेन तस्मात् जिह्वां विनिर्लिखेत् ।।

The tongue scraper should be without a sharp edge, curved and made of gold, silver, copper, tin or brass. Because the impurity (of coating), (accumulated) at the root of the tongue and obstructing the outward breath attains bad smell (in course of time, daily) therefore the tongue should be scraped well. Cs. su. 5.74, 75.

धार्याण्यास्येन वैशद्यरुचि सौगन्ध्यमिच्छता। जातीकटुक पूगानां लवंगस्य फलानि च।
कक्कोलस्य फलं पत्रं ताम्बूलस्य शुभं तथा। तथा कर्पूर निर्यासः सूक्ष्मैलायाः फलानि च।

One desiring cleanliness, relish and fragrance (of breath) should keep in his mouth nutmeg, musk melon, betel-nut, cloves, cubeb pepper, the auspicious betel leaf, camphor and small cardamom. Cs. su. 5. 76,77.

हन्वोर्बलं स्वरबलं वदनोपचयः परः। स्यात् परं च रसज्ञानमन्ने च रुचिरुत्तमा। न चास्यकण्ठशोषः स्यात् ओष्ठ्योः स्फुटनाद्भयम् ।। न च दन्ताः क्षयं यान्ति दृढमूला भवन्ति च। न शूल्यन्ते न चाम्लेन हृष्यन्ते भक्षयन्ति च। परानपि खरान् भक्ष्यांस्तैल गण्डूष धारणात् ।।

Using oil-gargles (as a routine measure of oral hygiene) results in strength of the jaws, strength of voice, fulsome plumpiness of the face, keen senstivity to the

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palate and excellent appetite. For him (who uses them), there will not arise a dryness of throat, or any fear of suffering from chafing of the lips. His teeth will not becomes carious but will get firmly rooted and do not ache. Nor are they set on edge by acidity and are enabled to chew even the hardest of the eatables. Cs. su. 5.77-80.

45. स्नेहाभ्यंगाद्यथा कुम्भश्चर्म स्नेह विमर्द नात्। भवत्यु पागांत् अक्षः क्लेशसहो यथा।।
तथा शरीरमभ्यंगात् दृढं सुत्वक् च जायते। प्रशान्तमारुताबाधं क्लेश व्यायामसंसहम्।।

(*inunction with oil*) Just as a pitcher by smearing with oil or a hide by pounding it with oil or an axle by lubrication with oil becomes firm and hard-wearing, so does the body become by daily inunction, firm (and) the skin comely; the *vata* disorders are quietened and tolerance to hardship and physical strain comes about. Ca. su. 5.85, 86.

स्पर्शनिऽभ्यधिको वायुः स्पर्शनं च त्वगाश्रितम्। त्वच्यश्च परमभ्यंगः तस्मात् तं शीलयेन्नरः।।
न चाभिघाताभिहतं गात्रमभ्यंग सेविनः। विकारं भजतेऽत्यर्थं बल कर्माणि वा क्वचित्।।
सुस्पर्शोपचितांगाश्च बलवान् प्रियदर्शनः। भवत्यभ्यंग नित्यत्वान्नरोऽल्पजर एव च।।

Vāta is the predominant (element) in the sense of touch and the sense of touch resides in skin. Inunction is the greatest tonic to skin; therefore a person should make a habit to have it (daily). (A person's) limbs habituated to daily inunction are not liable to be affected seriously by injury due to external trauma or by violent exertion. By daily inunction, a person becomes smooth, plump and shapely in his limbs; strong and good looking; and, age affects him only little. Cs. su. 5. 87-89.

खरत्वं स्तब्धता रौक्ष्यं श्रमः सुप्तिश्च पादयोः। सद्य एव उपशाम्यन्ति पादाभ्यंगनिषेवणात्।।
जायते सौकुमार्यं च बलं स्थैर्यं च पादयोः। दृष्टिः प्रसादं लभते मारुतश्च उपशाम्यति।।
न च स्यात् गृध्रसीवातः पादयोः स्फुटनं न च। न सिरास्नायु संकोचः पादाभ्यङ्गेन पादयोः।।

Roughness, stiffness, dryness, fatigue and numbness of feet are immediately relieved by inunction of the feet; comeliness, strength and steadiness of feet and the gracefulness in vision are achieved (by this) and the *vāta* discordance gets quietened. By inunction of the feet, sciatica due to *vata* will not arise nor the breaking of fissures of the feet, nor the contraction of the vessels and the muscles of the legs. Cs. su. 5.90-92.

46. स्नेहाभ्यंगाधथा कुम्भश्चर्म स्नेह विमर्दनात्। भवत्युपांगादक्षश्च दृढः क्लेशसहो यथा।
तथा शरीरमभ्यंगात् दृढं सुत्वक् च जायते। प्रशान्तमारुताबाधं क्लेशव्यायामसंसहम्।।

Just as a pot by bathing it in oil; skin, by pounding in with oil and the axil (of the cart) by lubricating (it with oil) become hard and durable as well as tolerant to stress and strain, similarly the body becomes by bathing with an oil (massage) hard and durable, good in skin, warding neurogenic afflictions and resistant to stress and strain as well as physical exercise. 85,86.

By taking recourse to (massaging with) oil bath, the roughness, the stiffness, the dryness, the distress and tiredness, and the benumbedness of the feet become immediately quietened. Tenderness, strength and steadiness will come about in the

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feet. There will (also) ensue a gracefulness in the eyes; and, the neurogenic upsettings will get quietened. There will be no grdhrasi, splitting of the feet, or the contraction of the ligaments and the veins by massaging with oil bath of the feet. 90-92.

47. दौर्गन्ध्यं गौरवं तन्द्रां कण्डूमलमरोचकम्। स्वेद बीभत्सतां हन्ति शरीर परिमार्जनम्।।

(*sponging* :) Sponging of the body destroys bad odour, heaviness, torpor, itching, dirt, inappetance and offensive sweat. Ca. su. 5.93.

48. पवित्रं वृष्यमायुष्यं श्रम स्वेद मलापहम्। शरीर बल संधानं स्नानमोजस्करं परम्।।

(bathing.) Taking a bath is purifying and holy, promotive of virility as well as longevity, eliminative of fatigue, sweat and dirt, conducive to bodily strength and is vitalising to the highest degree. Ca. su. 5.94.

प्रातः स्नानमलं च पाप हरणं दुःस्वप्नविध्वंसनं शौचस्य आयतनं मलापहरणं संवर्धनं तेजसाम्।
रुपद्योतकरं शरीर सुखदं कामाग्निसंदीपनं स्त्रीणां मन्मथगाहनं श्रमहरं स्नाने दशैते गुणाः।

A removal of dirt and sin, destruction of (the lingering effect of) bad-dreams (overnight), (acting as the) very abode for cleanliness, taking away of the impurities, promotion of lustre (in the body), illumination of the (physical) beauty, conferring (general) happiness of the body, stimulation of lust and zest (of life), (causing a) bathing in the very god of love to the ladies, removal of fatigue-these are the ten (good) qualities of taking bath in the morning-Yogaratnakara, dina carya.

निद्रादाह श्रमहरं स्वेदकण्डू तृषापहम्। हृद्यं मल हरं श्रेष्ठं सर्वेन्द्रिय विबोधनम्।।
तन्द्रापाप्मोप शमनं तुष्टिदं पुंस्त्ववर्धनम्। रक्तप्रसादनं चापि स्नानमग्नेश्च दीपनम्।।

Bathing removes sensation of burning, sleepiness and fatigue, takes away sweat, itch and thirst and is pleasant; (it is) a remover of impurities, (and) the best; (it is) purificatory to all the organs, pacificatory to (mental) lassitude as well as to a sense of sin or wickedness, bestower of a sense of satisfaction (and is) promotive of virility, gratifying to blood and stimulative of digestive power (lit. gastric fire). Ss. ci. 24. 57,58.

उष्णेन शिरसः स्नानं अहितं चक्षुषः सदा। शीतेन शिरसः स्नानं चक्षुष्यमिति निर्दिशेत्।।
श्लेष्ममारुत कोपे तु ज्ञात्वा व्याधि बलाबलम्। काममुष्णं शिरः स्नानं भैषज्यार्थं समाचरेत्।।

(Medicative aspects of bathing): Bathing in hot water over the head is always injurious to the eyes. Bathing in cold water over the head should be considered promotive to the health of the eyes. In cases of provocation to *kapha* and *vāta* one should take recourse to bathing the head in hot water as desirable and as a medicative measure after ascertaining the strength and weakness of the disease concerned. Ss. ci. 24. 59,60.

तच्च अतिसार ज्वरित कर्ण शूलानिलार्तिषु। आध्मानारोचकाजीर्ण भुक्तवत्सु च गर्हितम्।।

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Bathing is injurious to the patients of diarrhoea, fever, earache, *vata* diseases, intumescence of the body, anorexia and those who overeat (lit. those who eat when the previous meal is undigested). Ss. ci. 24.62.

स्नान मूलाः क्रियाः सर्वाः स्मृतिश्रुत्युदिता नृणाम्।
तस्मात् स्नानं निषेवेत श्री पुष्ट्यारोग्यवर्धनम्।।

All (religious) acts stated in *śruti* (*vedas*) and *śmṛīti* (traditional texts) have bathing as its source. Therefore one should take up to bathing that would promote wealth, nourishment and health. Yāgnavalkya smṛti.

शुकवत् भाषणम् कुर्यात् बकवत् ध्यानमाचरेत्।
अजवत् चर्वणं कुर्यात् गजवत् स्नानमाचरेत्।।

Speak (clear) like a parrot, meditate (endlessly) like a crane, chew (forcefully) like a sheep, bathe (profusely) like an elephant.

गुणा दश स्नान शीलं भजन्ते बलं रुपं स्वरवर्ण प्रशुद्धिः। स्पर्शश्चगन्धश्च विशुद्धता च श्रीः सौकुमार्यं प्रवराश्च नार्यः।।

Ten qualities accrue to a person habitually indulging in bathing: strength, beauty, clarity of voice and complexions, (good) touch, fragrant smell, prosperity, tenderness and excellent ladies. Mahābhārata.

49. काम्यं यशस्यं आयुष्यं अलक्ष्मीघ्नं प्रहर्षणम्।
श्रीमत् पारिषदं शस्तं निर्मलाम्बर धारणम्।।

(*dressing clean* :) The wearing of clean dress is attractive, conducive to reputation, promotive of longevity, avertive of bad luck, exhilarative, worthy of society and commendable. Ca. su. 5.95.

I. *habits of living-general evaluations*

50. *happy life* (*an ayurvedic definition*).

तत्र शारीरमानसाभ्यां रोगाभ्यामनभिद्रुतस्य विशेषेण यौवनवतः समर्थानुगत बलवीर्य यशः पौरुष पराक्रमस्य ज्ञान विज्ञानेन्द्रियेन्द्रियार्थ बल समुदये वर्तमानस्य परमर्द्धिरुचिर विविधोपभोगस्य समृद्ध सर्वारम्भस्य यथेष्ट विचारिणः सुखमायुरुच्यते।

He who is not pursued with diseases, somatic or mental; who is particularly youthful; who is efficient and accompanied with strength, fame, manliness and valour; who continues to exist in a community of (factors such as) knowledges, expertise, sensibilities and sense fulfilments – all of which are strong (in his case); who is in an enjoyment of excellent prosperity, as well as charming and varied gratifications; and whose all undertakings are abundantly well endowed; and who can travel as he desires -- such a man is said to have a happy span of life.

यदाल्हादं जनयति तत् आत्यन्तिक तादात्विक भेदेन सुखं द्विविधं। तत्रात्यन्तिकं सुखं मोक्षः तादात्विकं कामदिश्च।।

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(*happiness*): That which generates gladness is happiness. This is of two kinds: absolute and momentary. Absolute happiness is final emancipation, the momentary are the lust and the like. Arunadatta. Ahr. su. 1.2.

praise of an active life

51. चरन् वै मधु विन्दति चरन् स्वादुमुदुम्बरम्। सूर्यस्य पश्य श्रेमाणं यो न तन्द्रयते चरन्।।

It is by walking about, one secures honey, it is by walking about, one secures the delicious udumbara fruit. Look at the exertion of the sun; he never gets fatigued by walking about.

कलिः शयानो भवति संजिहानस्तु द्वापरः।
उत्तिष्ठन् त्रेता भवति कृतं सम्पद्यते चरन्।। चरैवेति।

A sleeper becomes fit for the (present) *kali* age (weak, unhealthy and shortlived). A waker up becomes fit for the *dvāpara* age. A stander up becomes fit for *treta* age. The walker about secures the full wealth of the *krta* age. Therefore the advice given is be walking about, always (i.e. be active throughout).

a regimen for good life

52. ब्राह्मे मुहूर्ते चोत्थायाय विष्ण्वादीन् देवतान् स्मरेत्।
शौचं कृत्वा मृदाऽचम्य भक्षयेत् दन्तधावनम्।।

Getting up at *Brahmi muhurta*, one should remember Gods such as Vishu and the like; (and, then) after doing the toilet, (one) should then clean the teeth. Agnipurāna

ब्रह्मणोऽयं ब्राह्मः। ब्रह्म ज्ञानं तदर्थमध्ययनाद्यपि ब्रह्म तस्य योग्यो मुहूर्त्तो ब्राह्मः, ब्रह्मयोग्यश्च।
रजनीप्रान्त यामार्धं ब्राह्मः समयमुच्यते।

This *muhurta* (or the time segment of the day) is meant for (contemplating upon) *Brāhma,* hence it is *Brāhma*. A *muhurta* for the knowledge of Brahma, for that purpose or to make a study therein or appropriate for Brhma. Sasilekha.
(*Three opinions*): (1) The half *yama* at the end of the night is called Brahma – Skanda purāna.

53. रात्रेस्तु पश्चिमो यामो मुहूर्तो ब्राह्म उच्यते।
रात्रेः पश्चिमयामस्य मुहूर्तो यस्तृतीयकः।

(2) The last *yama* of the night is called Brahma. Ratnavali
(3) The third muhurta of the last *yāma* of the night. Yagnavalkya.

मैत्रं प्रसाधनं स्नानं दन्त धावनमंजनम्।
पूर्वाह्न एव कुर्वीत देवतानां च पूजनम्।।

Toilèting, massage and shampooing, bathing, cleaning the teeth, application of the collyrium, and the worship of the gods should be done in the forenoon. Manu.

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हितमेव अनुरुध्यन्ते प्रपरीक्ष्य परीक्षकाः ।
रजो मोहावृतात्मानः प्रियमेव तु लौकिकाः ।।

The scrupulous take up only that which is wholesome after full scrutiny, (while) the ordinary (people) (take up) only that which is pleasing, since their self is overcast with (either) passion (or) dullness. Caraka.

विहितस्य अननुष्ठानं इन्द्रियाणामसंयमः ।
निषिद्धसेवनं नित्यं वर्जनीयं प्रयत्नतः ।।

Non practising of what is prescribed by the Treatises (concerned), non-restraint of the senses, indulgence in the prohibited - these should be constantly given up with effort - Vratahemadri.

अनाचारमनारोग्यमनायुष्यमस्वर्ग्यं च अति भोजनम् । अपुण्यं लोकविद्विष्टं तस्मात् तत् परिवर्जयेत् ।।

Excessive eating is a wrong conduct, unhealthy, non-life giving, not leading to heaven, unholy and despised by all. Therefore this should be abandoned. Manu.

न विषादे मनः कार्यं विषादो बलवत्तरः । विषादो हन्ति पुरुषं बालं कृद्ध इवोरगः ।।

One should not indulge one's mind in dejection. Dejection is very powerful. Dejection will kill a person like an angry serpent killing a boy. Ramayana.

साहसं वर्जयेत् कर्म रक्षन् जीवितमात्मनः । जीवन् हि पुरुषस्तु इष्टं कर्मणः फलमश्नुते ।।

An adventursome act should be given up, if one (desires to) protect one's life. If one lives, a person would get the desired fruit of his acts.

विहितस्य अननुष्ठानात् निन्दितस्य च सेवनात् । अनिग्रहात् च इन्द्रियाणां नरः पतनमृच्छति ।।

By not practising the prescribed, by indulging in the despised and by non-controlling of the senses, a person falls down. Yagna-valkya smrti.

दुराचारो हि पुरुषो लोके भवति निन्दितः । दुःखभागी च सततं व्याधितो अल्पायुरेव च ।।

A person of bad conduct becomes despised in the world, always liable to grief, disease afflicted and of a short span of life. Manu.

न चिरं पापकर्माणः क्रूरा लोकजुगुप्सिताः । ऐश्वर्यं प्राप्य तिष्ठन्ति शीर्णमूला इव द्रुमाः ।।

The cruel and the doers of the sinful acts (and) the abhored by the world do not stay long (in their prosperity), after securing the wealth; like the trees whose roots are decayed (*and whose greenery* is therefore short lived). Ramayana.

तुल भ्रम गुणाकर्षधनुरार्कषणादिभिः । आयामो विविधोऽङ्गानां व्यायाम इति कीर्तितः ।।

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Stretching of the different organs (of the body) by means of a swirling of the club, a dragging of the rope, a stringing of the bow and the like is called as physical exercises. Dhanurveda.

शरीरायासजनकं कर्म व्यायाम संज्ञितम्।

The work that causes a fatigue of the body is designated as the physical exercise. Susruta.

54. शनैरर्थः शनैः पन्थाः शनैः पर्वतमारुहेत्। शनैर्विद्या च धर्मश्च व्यायामश्च शनैः शनैः।।

One should (earn) money gradually, (traverse the long) road gradually, climb a mountain gradually, (secure) the learning and the *dharma* gradually and so also (carry out) the physical exercises gradually. Canakya.

55. हठस्य प्रथमांगत्वादासनं पूर्वमुच्यते। कुर्यात् तदासनं स्थैर्यमारोग्यं च अंगलाघवम्।।

Since postures constitute the first component of *haṭayoga*, these postures are being spoken of at the outset (itself). The posture brings about, firmness and stability, health and deftness of the organs. Hata yoga pradipika.

आसनानि तु तावन्ति यावन्त्यो जीवयोनयः। चतुराशीति लक्षाणां एकमेकमुदाहृतम्। ततः शिवेन पीठानां षोडशोनं शतंकृतम्।

Postures (*āsanas*) are as many as there are the types of the living creatures. (We shall) illustrate one by one of the eightyfour (*tradition considers that there are eighty four lakhs of the types of the living organisms*). This number has been made into hundred taking into consideration of the sixteen seats of Śiva. Gorakṣa śataka.

सुखेनैव भवेत् यस्मिन् अजस्रं ब्रह्मचिन्तनम्। आसनं तद्विजानीयात् अन्यत् सुख विनाशनम्।।

Posture is to be known as that whereby there can be an easy and uniterrupted thinking about God. The others simply destroy happiness. Tejobindupanisad.

आसनं प्राणसंयामः प्रत्याहारोऽथ धारणा। ध्यानं समाधिरेतानि योगाङ्गानि भवन्ति षट्।।

(Taking up the suitable) postures (of the body), holding in of the breath, leaving it out (gradually) and the retention (of the breath), contemplation and *samādhi* (attainment of the contemplated goal) – these form the six limbs of *yoga*. Gorakṣa śataka.

56. आदित्यमस्य नमस्कारं ये कुर्वन्ति दिने दिने। जन्मान्तर सहस्रेषु दारिद्र्यं नोपजायते।।

For he who does the worship of sun-god (viz. *a set of codified phyicial exercises worshiping sun*) every day, there will not occur poverty to him even in thousand births.

57. उरसा शिरसा चैव वचसा मनसा तथा। हस्ताभ्यां जानुपादाभ्यां प्रणामो अष्टांग उच्यते।।

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(*salutation by the eight limbs ; another set like the above, for all occassions of expressing devotion*) Salutation (which is carried out) by the chest, the head, the speech, the mind, the hands, the knee and the feet (all the organs mentioned touching the ground simultaneously, as one bows lying fully on the ground face downwards). This is called as a salutation by the eight limbs.

58. परिश्रमो मिताहारो भूगतावाश्वनी सुतौ। तावनादृत्य नैवाहं वैद्यमन्यं समाश्रये।।

Exertion and limited food, when these two gods of the heavens (lit. Aswini Kumarās) have come down to earth, dishonouring these two, I shall not take recourse to any other physician.

59. यस्मात् तद् व्यसति श्रेयः तस्माद् व्यसनमुच्यते। व्यसत्यधोवा व्रजति तस्मात् तत् परिवर्जयेत्।।

health practices - (vices). Because it throws (*vyas*) one away from what is auspicious, it is called *vyasana* or vice. It throws one down or leads one (to fall from ethics and righteousness or *dharma*). Therefore one should abandon it., Kamandakiya nitisara.

मृगया अक्षो दिवास्वप्नः परिवादः स्त्रियो मदः। तौर्यत्रिकं वृथाटया च कामजो दशको गणः।।

Hunting, gambling, day sleep, calumny, womanising, pride, addiction to the *three* musicals (dance, song and instruments), and aimless roaming about - these *ten* form the lust born (vices). Manu.

हुताशनो जलं व्याधिर्दुभिक्षां मरकस्तथा। इति पंचविधं दैवं व्यसनं मानुषं परम्।।

Fire, floods, disease, famine and epidemics - these five are god-given (calamities). The great (calamity) of vicious habits is man-made. Kāmandakiya nitisara.

व्यसनस्य च मृत्योश्चव्यसनं कष्टमुच्यते। व्यसन्यधोधो व्रजति स्वर्याति अव्यसनी मृतः।।

Between vice and death, vice is said to be more difficult. Throwing a person down deeper and deeper, vice leads him finally to hell. The dead (person) who has lived without any vices, straightaway goes to heaven (*without any fall whatsoever, as in the former case*). Manu.

अनभ्यासेन विद्यानाम् असंसर्गेण धीमताम्। अनिग्रहेण चाक्षाणां जायते व्यसनं नृणाम्।।

By not practising any learning, by not getting into contact with the wise and by not restraining one's sense organs, vice gets born in men. Kavyalankara.

केवलं व्यसनस्योक्तं भेषजं नयपण्डितैः। तस्योच्छेद समारम्भो विषाद परिवर्जनम्।।

The sole medicine for the vice as spoken by the experts in prudence is: the commencement of measures for its eradication and the giving up of the distress that follows it. Pancatatra.

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60. भावाभ्यसनमभ्यासः शीलनं सततक्रिया।

habit-formation : Taking up any thing constantly is practice; habitutation is an incessant activity. Caraka.

पौनः पुन्येन करणं अभ्यास इति कथ्यते। पुरुषार्थः स एवेह तेनास्ति न विना गतिः।।

Doing a thing again and again is called practice. Man's achievement is this perseverance itself. There is no salvation without it. Yogavāśiṣṭha.

तत् चिन्तनं तत्कथनमन्योन्यं तत्प्रबोधनम्। एतदेक परत्वं च तदभ्यासं विदुर्बुधाः।।

Thinking upon it, talking about it, learning about it from one another, being constantly intent on it - this is what the wise know as practice. Yogavasiṣṭha.

जलमभ्यास योगेन शैलानां कुरुते क्षयम्। कर्कशानाम् मृदुस्पर्शं किमभ्यासान्न साध्यते।।

Water wears down the rocks by the Yoga of constant practice and renders the hard stone, smooth and soft to touch. What cannot be achieved by practice?

अभ्यासात्प्राप्यते दृष्टिः कर्मसिद्धि प्रकाशिनी। रत्नादि सदसज्ज्ञानं न शास्त्रादेव जायते।।

It is by practice one gets the vision illuminative to excellence in work. The truth or the otherwise of the gems and the like is secured by such constant practice and not by reading books only. Aṣṭāṅga hṛdaya.

61. सम्यक् स्वापो वपुषः परमारोग्याय।

Sound sleep is best for the health of the body. Kavyamimamsa.

चित्तं प्रसादयति लाघवमाददाति।
प्रत्यंगमुज्ज्वलयति प्रतिभा विशेषम्।
दोषानुदस्यति करोति च धातु साम्यम्
आनन्दमर्पयति योगविशेषगम्यम्।।

It (i.e. sleep) graces the mind, brings forth a lightness to every limb, enkindles a special brilliance of the mind, destroys vitiations, brings about an equanimity among the body constituents and offers to man a beatitude that is attainable only by special yoga. Canda kausika.

ये स्वपन्ति सुखं रात्रौ तेषां कायाग्निरिध्यते। आहारं प्रतिगृह्णाति ततः पुष्टिकरं महत्।।

He who sleeps happily in the night, his disgestive fire is rendered effulgent; (the body would then) take food (in requisite measures) and this would serve for excellent nourishment. Skandapurāṇa.

अनाक्रान्तेन्द्रियच्छिद्रो यतः क्षुब्धोऽन्तरेव सः। संविदाऽनुभवत्याशु स स्वप्न इतिकथ्यते।।

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dream : That which a person experiences quickly (during his sleep) by his own understanding, because he is agitated internally though his sensibilities are unclouded - is called dream. Yogavasistha.

इन्द्रियाणामुपरमे मनोऽनुपरतं यदि। सेवते विषयानेव तद्विद्यात् स्वप्न दर्शनम्।

If mind experiences objects when the senses are at rest, but is itself not resting, that should be known as seeing a dream. Śankarācārya.

नाति प्रसुप्तः पुरुषः सफलानफलानपि। इन्द्रियेशेन मनसा पश्यति स्वप्नाननेकधा।।

A person who has not gone into sound sleep sees various kinds of dreams fruitful or futile, through his mind which is the lord over his senses. Caraka.

62. श्रोत्र त्वक् चक्षुर्जिह्वा घ्राणानामात्मसंयुक्तेन मनसा अधिष्टितानां स्वेषु स्वेषु विषयेषु अनुकूल्यतः प्रवृत्तिः।

(*lust*) This is a tendency towards what is favourable as concerning (the senses) of the ear, the skin, the eye and the tongue as they (act) coupled with the self and presided over by the mind, in their own respective (sense) objects. Kāmasūtra.

शरीर स्थिति हेतुत्वात् आहारसम धर्माणो हि कामाः।

Since they are responsible for sustaining the body, lusts have the same nature as that of food - Kāmasutra.

विषस्य विषयाणां च दूरमत्यन्तमन्तरम्। उपभुक्तं विषं हन्ति विषयाः स्मरणादपि।।

The distance between poison and sense objects (*viṣa* and *viṣaya* both more or less similar in sounding) is very great. The poison kills (one) when consumed; (while,) the sense objects kill even by recollecting them. Chandragomi.

न जातु कामः कामानामुपभोगेन शाम्यति। हविषा कृष्णवर्त्मेव भूय एव अभिवर्धते।।

No lust whatsoever gets pacified by enjoyment. It flourishes forth further thereby, like a fire in which ghee is poured down. Manu.

एतत् कामफलं लोके यद् द्वयोरेकचित्तता। अन्यचित्त कृते कामे शवयोरेव संगमः।।

This is the fruit of the lust because of which there is a single mindedness among two people (the husband and the wife, after marriage). A lust (shown between the two) with minds elsewhere is a cohabitation between two corpses. Śṛingara śataka.

दिवा पश्यति नोलूकः काको नक्तं न पश्यति। अपूर्वः कोऽपि कामान्धो दिवानक्तं न पश्यति।।

Owl does not see by day. Crow does not see by night. But, a lust-blinded person is such a curious creature that does not see either by day or night.

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कामः सर्वात्मना हेयः स चेद् धातुं न शक्यते। स्वभार्यां प्रतिकर्त्तव्यः सैव तस्य हि भेषजम्।।

Lust is despicable in all ways. But if one is not able to sustain it well, one should do this to one's own wife. That alone is its medicine. Mārkaṇḍeya purāṇa.

बोद्धव्यंतु दोषेष्विव। नहि भिक्षुकाः सन्तीति नाधिश्रीयन्ते। न हि मृगाः सन्तीति यवा नोप्यन्त इति वात्सायनः।

One should understand and appreciate the blemishes (in lust), (it is not that one should give it up fully). For, it is not that food is cooked in a vessel for the fear that there are beggars (*in the world, to whom it may be necessary to give it*), nor is it that seeds are never sown, as beasts are there (to destroy it). This is the opinon of Vātsyayana. Kamasutra.

इन्द्रियोत्तमरोगाणां भोगाशावर्जनादृते। नौषधानि च तीर्थानि न मन्त्राश्च शान्तये।।

For the diseases born of excessive indulgence in senses, there are no medicines other than giving up the desire for their enjoyment; neither the pilgrimage nor the incantations would assuage them. Yogavāśiṣṭha.

मोक्षो विषयवैरस्यं बन्धो वैषयिको रसः। एतावदेव विज्ञानं यथेच्छसि तथा कुरु।।

Emancipation is (finding a) tastelessness in sense objects. Bondage is (finding an) abiding interest in sense objects. This is all the knowledge. (Knowing this), do as you desire. Aṣṭāvakra gīta.

63. आहारनिद्राभयमैथुनं च सामान्यमेतत् पशुभिर्नराणाम्।
ज्ञानं हि तेषां अधिको विशेषो ज्ञानेन हीनः पशुभिः समानाः।।

(*celibacy and married life*:)

Food, sleep, fear and cohabitation – these are common to beasts and men. It is knowledge therein which alone is the greater speciality (found only in the latter). If devoid of knowledge, men are similar to the beasts. Vṛddha Cāṇakya.

अर्धो हि वा एष आत्मनस्तस्माद्यंज्जयायां न विन्दते नैतावत् प्रजायते असर्वो हि तावद् भवति। अथ यद्यैव जायां विन्दते प्रजायते तर्हि सर्वो भवति।।

Wife is half of one's soul. Therefore till one does not acquire a wife and an off-spring thereby, he is not a whole till then. And only when he secures a wife and raises an offspring, then alone he becomes complete. Vājasaneya Brāhmaṇa.

जायापत्योर्न विभागो जायते।

There is no separation between the husband and the wife. Apastamba dharma sutra.

पंचविंशतिपर्यन्तं ब्रह्मचर्यं समभ्यसेत्। बलवान् शक्ति सम्पन्नः शतायुश्च भविष्यति।।

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One should practice celibacy till twenty five years old. By this, he becomes strong, endowed with energy and lives for hundred years.

ब्रह्मचर्यं समाप्याथ गृह धर्मं समाचरेत्। ऋण त्रय विमुक्त्यर्थं धर्मेण उत्पादयेत् प्रजाम्।।

After completing the period of celibacy one should take up to the life of the house-holder in order to liberate oneself from the three types of debts (i.e. to the gods, the sages and the manes or the ancestral fathers) and generate offsprings in accordance with *dharma*.

जायमानो ह वै ब्राह्मणः त्रिर्भिऋणवान् जायते यज्ञेन देवेभ्यो ब्रह्मचर्येण ऋषिभ्यः प्रजया पितृभ्यः। स वै तर्हि अनृणो भवति यदा यज्वा ब्रह्मचारी प्रजावानिति।।

A *brāhmin* even as he gets born is accompanied with three types of debts; (to the gods, the sages and the manes); (he discharges them) for the gods by sacrifices, sages, by celibacy and the manes by (producing) offsprings. Then alone does he become debtfree when the celibate becomes a person of offsprings, after doing the (needed) sacrificial rites. Sarira bhasya.

तस्मात् कन्यामभिजनोपेतां त्रिवर्षात् प्रभृति न्यूनवयसं श्लाघ्याचारे कुले प्रसूतां रुप शील लक्षण सम्पन्नां अन्यूनाधिकाविनष्ट दन्त नख कर्णकिशाक्षिस्तनीमरोगिप्रकृति शरीरां तथा विधा एव श्रुतवान् शीलयेत।।

That is why one should then think of taking a girl in marriage, from a good family, more than three years younger in age, born in a family of commendable character, endowed with beauty, character and good features, whose teeth, nails, ear, hair, eyes and breasts are free from the blemishes of excess, deficiency or loss, of a constitution and body that is disease free and along with these, learned as well. Kāmasūtra.

महान्त्यपि समृद्धानि गोजाविधन धान्यतः। स्त्रीसम्बन्धे दशैतानि कुलानि परिवर्जयेत्।।
हीन क्रियं निष्पुरुषं निश्छन्दो रोमशार्शसम्। क्षय्यामयाव्यपस्मारिश्वित्रिकुष्ठिकुलानि च।।

Even if well provided with cows, sheep, goats, wealth and grains, the following ten types of families should be discarded in the matter of choosing a wife: of deficient culture, of son-less issue, of no learning, of long hairs, of piles, tuberculosis, disease-stricken, epileptic, leucodermic and leprotic. Manu.

एतै रेव गुणैर्युक्तः सवर्णः श्रोत्रियो वरः। यत्नात् परीक्षितो पुंस्त्वे युवा धीमान् जनप्रियः।।

The bridegroom should also be having similar qualities, be of the same lineage, well learned, specially tested for his potency as a man, young, wise and popular. Yāgnavalkya Smṛti.

तृप्त्यर्थं भोजनं येषां सन्तानार्थं च मैथुनम्। वाक् सत्य वचनार्थाय दुर्गाणि अतितरन्ति ते।।

Those for whom taking meals is for satisfaction (not for pleasing the tongue), cohabitation is for securing an offspring (not for lust) and speech is for the sake of telling truth (not for mere chattering) - they cross over (all) hurdles. - Hitopadesa.

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विवाहो न विलासार्थः प्रजार्थमेव केवलः । तेजोबुद्धिबलध्वंसो विलासात् प्रभवेत् खलु ।।

Marriage is not for lust; it is only for getting an offspring. If it arises only for lust, there will be destruction of lustre, intelligence and strength.

यथा मातरमाश्रित्य सर्वे जीवन्ति जन्तवः । एवं गार्हस्थ्यमाश्रित्य वर्तन्ते इतराश्रमाः ।।

Just as all live under the shelter of mother, so do all the other modes of life live with householder as their shelter. Manu.

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11. Dietetics

a. *attitude to food*

1. अत्र आहारार्थं कर्म कुर्यादनिन्द्यम्
कुर्यादाहारं प्राणसन्धारणार्थम्।
प्राणाः सन्धार्याः तत्वजिज्ञासनार्थं
तत्वं जिज्ञास्यं येन भूयो न दुःखम्।।

One should take up a work that is undespicable, for the sake of securing food. Food should be secured in order to keep the life sustained. Life should be sustained, so that one would attain the real principle (of Brahma) that needs to be known. This principle should be discussed about and ascertained, so that there will be no coming in of grief again. Yoga vāśiṣṭha.

पूजयेदशनं नित्यमद्याच्चेतदकुत्सयन्। दृष्ट्वा हृष्येत् प्रसीदेच्च प्रतिनन्देच्च सर्वशः।।

One should constantly worship food; and eat it without reproaching; (one) should get gladdened and become graceful by seeing it; and, be greatful to it in all ways. Manu.

पूजितं ह्यशनं नित्यं बलभूर्जं च यच्छति। अपूजितं तु तद् भुक्तमुभयं नाशयेदिदम्।।

Food that is worshipped confers strength and vitality constantly; if unworshipped, it destroys both. Manu.

अमृतं कल्पयित्वा तु यदन्नं समुपागतम्। प्राणाग्निहोत्रविधिना भोजनं तद्व्याधिअघापहम्।।

That food which comes in front should be considered as the very ambrosia of the gods and then eaten, as if an oblation is done to the fire of life (within oneself). This would remove all diseases and sins. Brhadyāgnavalkya smrti.

न रागात् नापि अविज्ञानात् आहारानुपयोजयेत्। परीक्ष्य हितमश्नीयाद् देहो हि आहार सम्भवः।।

One should not consume food either with lustfulness or ignorance. One should scrutinise it well and then eat wha' is wholesome. For, body is born of the food. Caraka.

आचारः कुलमाख्याति वपुराख्याति भोजनम्। वचनं श्रुतमाख्याति स्नेहमाख्याति लोचनम्।।

Conduct (of a person) bespeaks of the family (from where he has come). (His) body bespeaks of the food (he consumes). (His) speech bespeaks of his learning. (His) eyes bespeaks of the affection (he possesses). Śiva purāna.

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पृथिव्यां त्रीणि रत्नानि जलमन्नं सुभाषितम्। मूढैः पाषाण खण्डेषु रत्न संज्ञा विधीयते।।

There are three jewels in this earth : water, food and good sayings. Fools ascribe the name of jewel to the pieces of stones. Vrddha Canakya.

b. *dietetics*

इष्ट वर्ण गन्ध रससंस्पर्शं विधिविहितमन्नपानं
प्राणिनां प्राणिसंज्ञकानां प्राणमाचक्षते कुशलाः।
प्रत्यक्ष फलदर्शनात्।

(an introduction:) The experts hold that the articles of food and drink which are pleasing in colour, flavour, taste and touch and taken as prescribed (in the texts concerned) constitute *the* life, for animals and whatever that has life; (this is so) because of their directly being seen to be so (i.e. this fact can be verified by practical observation).

तदिन्धना ह्यन्तराग्नेः स्थितिः तत् सत्वमूर्जयति तत् शरीर धातु व्यूह बल वर्णेन्द्रियप्रसाद करं यथोक्तमुपसेव्यमानं विपरीतमहिताय संपद्यते।

This (type of food) is the fuel for the maintenance of the inner (gastric) fire; it invigorates mind; if used as directed, it promotes the proper distribution of the body elements, strength, complexion and the acuity of the sense organs; the contrary, would lead to unwholesome (results)ण् Cs. 27. 3.

तस्माद्धितावहितबोधनार्थमन्नपान विधिम् अखिलेन उपदेक्ष्यामो अग्निवेश।

Therefore Agnivesa we shall describe in full the prescribed method of food and drinks so as to understand the wholesome and the unwholesome (among them).

(*activities of the components of food within the body :*)

2. तत् स्वभावादुदकं क्लेदयति लवणं विष्यन्दयति क्षारः पाचयति मधु संदधाति सर्पिः स्नेहयति क्षीरं जीवयति मांसं बृंहयति रसः प्रीणयति सुरा जर्जरीकरोति शीधुरवधमति द्राक्षासवौ दीपयति फाणितं आचिनोति दधि शोफं जनयति पिण्याक शाकं ग्लपयति।

By their very nature, water moistens, salt liquefies, alkali digests, honey synthesises, ghee causes unctuousness, milk gives life, flesh causes roborance, flesh-juice nourishes, *surā* wine causes senile degeneration, *śīdhu* wine emaciates, grape wine stimulates digestion, liquid gur causes accumulation of morbid humours, curds causes edema (and) the vegetable green *piṇyāka* depresses. Cs. su. 27. 4.

(A general dietetic evaluation of articles of food commonly used then, is given by Caraka hereafter. Much detailed information also follows in this Chapter, which is *still* relevant, for, many of these articles are in use even now, in the different regions of India. The actual food habits of those times can also be assessed thereby).

(*a classification of the food articles :*)

3. शूक धान्य शमी धान्य मांस शाक फला श्रयान्। वर्गान् हरितमद्याम्बु गोरसेक्षुविकारिकान्।।
दश द्वौ च अपरौ वर्गौ कृताहार योगिनाम्। रसवीर्य विपाकैश्च प्रभावैश्च प्रचक्ष्महे।।

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Corns, pulses; meats; vegetables; fruits; greens; wines, water, milk and its products; sugarcane varieties – these ten and two more, viz., cooked food and the adjuvants of food : of these (twelve categories of food articles), we shall now talk about their taste, potency, post-assimilatory effect and specific influences. cs. su.27. 6.7.

(The very elaborate list of the plants and their detailed dietetic evaluation given by Caraka as well as other classical authors like Suśruta, Vāgbhata, etc. most of whom include such dietetic information, are worth being explored and utilised by modern nutritionists as well as historians and botanists. It is important to note that as usual Caraka is the most elaborate and exhaustive here also. The dietetic information concerns articles of food from a very large list of plants, including even varieties of mushrooms, a sufficiently varied list of animal meats, including cow and buffalo, a rich number of fruits and vegetables and greens as well as many varieties thereof and also prepared foods and beverages, milks of various animals, oils, salts and so on).

4. (*a concluding remark:*)

अन्नपानैकदेशोऽयमुक्तः प्रायोपयोगिकः। द्रव्याणि न हि निर्देष्टुं शक्यं कात्स्र्येन नामभिः।।
यथा नानौषधं किंचित् देशजानां वचो यथा। द्रव्यं तत्त त्तथा वाच्यमनुक्तमिह यद्भवेत्।।

This is only a part of the Food and Drinks that has been described (above), mostly those that are in great or predominant use. (For) it is not at all possible to indicate the whole of the articles of food (used by man – kind) by their all and individual names.

, Just as there is no substance that may not be used as medicine and just as the words of the natives of the region are valid for them, similarly the words of the natives of the region concerned should be taken as valid for the several (other possible food) substances, if they have not been mentioned here. Cs. su. 27, 329–330.

5. (*nutritional diversities due to differences in preparation:*)

गुरूणां लाघवं विद्यात् संस्कारात् सविपर्ययम्। व्रीहिर्लाजा यथा च स्युः सक्तूनां सिद्धपिण्डिकाः।।
अल्पादाने गुरुणां च लघूनां च अतिसेवने। मात्रा कारणमुद्दिष्टं द्रव्याणां गुरुलाघवे।।
गुरुणां अल्पमादेयं लघूनां तृप्तिरिष्यते। मात्रां द्रव्याणि अपेक्षन्ते मात्रा च अग्निमपेक्षते।।

The heavy articles, it should be known, become light by preparation. (Similarly the light become heavy), just as rice (which is heavy) becomes light when roasted and the (heavy) roasted corn flour becomes light when made into balls and cooked. Intake of the heavy (foods) in small quantities and the light in large quantities is denoted as the proper measure in deciding the specific measure of intake as regards their heaviness and lightness. Heavy articles should be taken in small quantities and the light ones, till satiation. Articles of food should be taken in (limited) measures and the proper measure is in accordance with the strength of the gastric fire (of the individual). Cs. su. 27. 339–341.

गुरुलाघव चिन्तेयं प्रायेण अल्पबलान् प्रति।
मन्द क्रियान् अनारोग्यान् सुकुमारान् सुखोचितान्।।

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दीप्ताग्नयः खराहाराः कर्म नित्या महोदराः।
ये नराः प्रति तांश्चिन्त्यं नावश्यं गुरुलाघवम्।।

This consideration of heavy and light articles of food is mostly needed for those that have little strength and are indolent, unhealthy; delicate of health and given to luxury and ease. With reference to those persons whose digestive fire is inflammed, who are accustomed to hard articles of food, who are given to constant labour, and who have huge capacity for the consumption of food, such a consideration of the heavy and the light (foods) is not necessary. Cs. su. 27. 343-344.

6. (*The value of food :*)

"बल मारोग्य मायुश्च प्राणश्च अग्नौ प्रतिष्टिताः। अन्नपानेन्धनैश्च अग्निर्ज्वलति व्येति चान्यथा।"

Strength, health, longevity and the very life are dependent on the strenght of the gastric fire. And, the gastric fire burns, if fed by the fuel of the food and the drinks; or wanes, otherwise. Cs. us.27. 342.

हिताभिर्जुहुयान्नित्यमन्तरग्निं समाहितः। अन्नपान समिद्भिर्ना मात्राकालौ विचारयन्।।

The well-controlled man should always feed his gastric fire with the fuel of wholesome food and drink, carefully considering (their) measure and time. Cs. su. 27. 345.

7. प्राणाः प्राणभृतामन्नमन्नं लोकोऽभिधावति। वर्णः प्रसादः सौस्वर्यं जीवितं प्रतिभा सुखम्।।
तुष्टिः पुष्टि र्बलं मेधा सर्वमन्ने प्रतिष्ठितम् लौकिकं कर्मयद् वृत्तौ स्वर्गतौ यच्च वैदिकम्।।
कर्मापवर्गे यच्चोक्तं तच्चा अपियन्ने प्रतिष्ठितम्।।

The life of all living beings is food. The whole world runs after food. Complexion, gracefulness, good voice, long life, understanding, happiness, growth, strength, intelligence are all established in food. Whatever is beneficial to worldly life, whatever pertains to the vedic practices leading to heaven and whatever action leads to spirtiual salvation - all of these are said to be established (ultimately) in food. Cs. us. 27. 349-350.

(*dietetics - the complexities* :)

8. हिताहारोपयोग एक एव पुरुषवृद्धिकरो भवति। अहिताहारोपयोगः पुनर्व्याधिनिमित्तमिति।

It is the using of wholesome food alone that causes the welfare of the person; the use of unwholesome food is a cause of disease.

9. एवं वादिनं भगवन्तं आत्रेयं अग्निवेश उवाच-कथमिह भगवान् हिताहितानां आहारजातानां लक्षणं अनपवादं अभिजानीमहे हितसमाख्यातानां अहित समाख्यातानां च मात्रा काल क्रिया भूमि देह दोष पुरुषावस्थान्तरेषु विपरीतकारित्वं उपलभामह इति।

To the revered Atreya who was arguing thus, Agnivesa enquired, "How can I recognise here, Sir the characteristics of the entire aggregate of food unexceptionally as to whether they are wholesome or unwholesome ? For, we often

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obtain contrary results in the entire category of food even though they are designated (*as*) wholesome ; or unwholesome (in themeselves), *depending* upon the quantity, the time, the function, the region, the body, the vitiation and the variations in the stages of man.

तमुवाच भगवानात्रेयः -

यदाहार जातम् अग्निवेश समान् चैव शरीरधातून् प्रकृतौ स्थापयति विषमांश्च समीकरोति एतत् हितं विद्धि विपरीतं तु अहितमिति, इति एतत् हिताहित लक्षणं अनपवादम् भवति।

Revered Ātreya replied to him - whatever that is called food, Agnivesa, that *will* establish the constituents that are similar to itself in the body into a state of nature (or normalcy) and will equalise what is dissimilar or counter to itself; know such a thing as wholesome ; the contrary is unwholesome. This is the sure and unexceptionable characteristic of the wholesome and the unwholesome. Cs. su. 25. 31-33

10. एवं वादिनं च भगवन्तं आत्रेयं अग्नि वेश उवाच-भगवन् न तु एतदेवं उपदिष्टं भूयिष्ठ कल्पाः सर्व भिषजो विज्ञास्यन्ति।

To the revered Ātreya, who was arguing thus, Agnivesa told "Revered Sir, if taught in this way, most of the physicians would still be unable to clearly distinguish between the wholesome and the unwholesome. "

तमुवाच भगवानात्रेयः-येषां विदितं आहार तत्वं अग्निवेश गुणतो द्रव्यतः कर्मतः सर्वावयशश्च मात्रादयो भावाः त एतदेवमुपदिष्टं विज्ञातुमुत्सहन्ते। यथा तु खलु एतदुपदिष्टं भूयिष्ठ कल्पाः सर्वभिषजो विज्ञास्यन्ति तथेतदुपदेक्ष्यामो मात्रादीन् भावान् अनुदाहरन्तः तेषां हि बहुविधकल्पा भवन्तिः

आहार विधिविशेषास्तु खलु लक्षणतश्च अवयवश्च अनुव्याख्यास्यामः।

Revered Ātreya replied to him "To whom is known this principle of food Agnivesa, according to the quality, the material, and the function as well as all of its further specifications such as the specialities of the quantity, the time, the region, etc., *he* alone can instruct on the unexceptionable characteristics of the wholesome and the unwholesome (as it pertains under all circumstances). He who knows this principle fully, *he* alone will have the enthusiasm (and appreciation) to understand (all of) these specialities (as we mention below). Most of the physicians who teach these aspects do so (*a clear indication of the existence of other related reference material at Caraka's times*) without giving the specific illustrations of the quantity, etc. For, the variations that are possible here are many. I shall now teach the specialities of the prescriptions regarding food according to these characteristics and the further specifications (as you desire). CS. su. 25. 34, 35.

11. तद्यथा -

आहारत्वं आहारस्य एकविधम् अर्थभेदात् स पुनः द्वियोनिः स्थावर जंगमात्मकत्वात् द्विविध प्रभावः हिताहितोदर्क विषेषात् चतुर्विधोपयोगः पान अशन भक्ष्यलेह्योपयोगात् षडास्वादः रसभेदः षट्विधत्वात् विंशति गुणः गुरुलघु शीत उष्ण स्निग्ध रूक्ष मन्दतीक्ष्ण स्थिर सर मृदु कठिन विशद पिच्छिल श्लक्ष्णखर सूक्ष्म स्थूल सान्द्र द्रवानुगमात्; अपरिसंख्येय विकल्पः द्रव्य संयोगकरण बाहुल्यात्।

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This is as follows : In terms of its meaning (viz., the major use), all foods are of one kind only - they are all *edible*. This is of two sources : plant and animal, and two kinds of effects, wholesome and unwholesome; four categories of use, drinks, chewables, gulpables and lickables; tastes are six, - for, the difference in taste are of six kinds; twenty qualities :(*based on their action within the body*), heavy-light, cold-hot, viscous-dry, slow-quick, steady-fickle, soft-hard, clear-slimy, slippery-rough, subtle-gross, dense-flowing; the actual alternatives of the individual dietary articles are uncountable because of the mainfold nature of the materials (involved), the combinations (that are possible) and the (details of the) acts of (their) making.

तस्य खलु

ये ये विकारावयवा भूयिष्ठमुपयुज्यन्ते भूयिष्ठकल्पानां च मनुष्याणां प्रकृत्यैव हिततमाश्च अहिततमाश्च तांस्तान् यथावदुपदेक्ष्यामः ।

In what predominant variations and what predominant forms are these food materials used and those that are most wholesome or most unwholesome by nature to most of the people, I shall now teach all of these in detail as they actually exist. Cs. su. 25. 36, 37.

(Then follow two long lists of classified contemporary food articles, the first one, of those that are most wholesome and the second, of those that ae unwholesome. This is followed by a very valuable long and classified list of pharmacological points of excellences in many selected material, some portions of which are given below. These three lists are of great value historically as well as medically. See. Cs. su. 25, 38, 39, and 40).

12. अतो भूयः कर्मौषधानां च प्राधान्यतः सानुबन्धाणि च द्रव्याणि अनुव्याख्यास्यामः । तद्यथा अन्नं वृत्तिकराणां श्रेष्ठम् उदकमाश्वासकराणां सुरा श्रमहराणां क्षीरं जीवनीयानां... लवणमन्नद्रव्यरुचिकराणाम् अम्लं हृद्यानां मांसं बृंहणीयानां... मधु श्लेष्मपित्तप्रशमनानां सर्पिः वातपित्त प्रशमनानां तैलं वात श्लेष्म प्रशमनानां वमनं श्लेष्महराणां विरेचनं पित्तहराणां बस्तिर्वातहराणां स्वेदो मार्दव कराणां व्यायामः स्थैर्यकराणां क्षारः पुंस्त्वोपघातिनां...

वायुः प्राण संज्ञाप्रदानहेतूनां अग्निरामस्तम्भशीतशूलोद्वेपन प्रशमनानां जलं स्तम्भनीयानां... अतिमात्राशनं आम प्रदोष हेतूनां...

कालभोजनं आरोग्यकराणां तृप्तिराहारगुणानां वेगसंधारणं अनारोग्यकराणां...

गुरुभोजनं दुर्विपाक कराणां एकाशन भोजनम् सुख परिणाम कराणां...

अनशनं आयुषो ह्रास कराणां प्रमिताशनं कर्शनीयानां, अजीर्णाध्यशनं ग्रहणीदूषणानां विषमाशनमग्नि वैषम्यकराणां विरुद्धवीर्याशनं निन्दित व्याधिकराणां प्रशमः पथ्यानां आयासः सर्वापथ्यानां मिथ्या योगो व्याधिकराणां... विषादो रोगवर्धनानां स्नानं श्रमहराणां हर्षः प्रीणनानां शोकः शोषणानां... सर्व रसाभ्यासो बलकराणां एक रसाभ्यासो दौर्बल्यकराणां...

निर्देशकारित्वं आतुरगुणानां भिषक् चिकित्साङ्गानां नास्तिको वर्ज्यानां लौल्यं क्लेशकराणां...

वैद्यसमूहो निःसंशयकराणां यागो वैद्यगुणानां विज्ञानमोषधीनां शास्त्र सहितः तर्कः साधनानां संप्रतिपत्तिः काल ज्ञान प्रयोजनानाम् अव्यवसायः कालातिपत्तिहेतूनां दृष्टकर्मता निःसंशयकराणाम् असमर्थता भयकराणां तद्विद्यसंभाषा बुद्धि वर्धनानां आचार्यः शास्त्राधिगमहेतूनाम् आयुर्वेदो अमृतानाम् सद्वचनं अनुष्ठेयानाम् असद् ग्रहणं सर्व अहितानां सर्व संन्यासः सुखानाम् इति ।

We shall now comment in detail upon the (several) medicinally functional materials in major detalis and along with some of the asscoiated informations : Among what sustain the body (in a routine way), the best is the cooked rice;

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among the refreshers, the best is water; *sura* wine, among the destroyers of fatigue; among the vitalisers, the best is milk;....among what give taste to food, the best is salt ; acid, among the cherished (*to give the kick?*); among the roborantsmeat, among the ; alleviators of the morbidities of *kapha* and *pitta* the best is honey; among the alleviators of the morbidities of *vāta* and pitta, the best is ghee; among the alleviators of the morbidities of *vāta* and *kapha,* the best is oil; (*of the medicative measures* ;) emesis is the best among the removers of *śleṣma* (morbidity); purgation, the best among the removers of *pitta* ; enema, the best among the removers of *vāta* ; sudation, the best among the softeners; (taking) physical exercises, the best among the causatives of steadiness; alkali, the best among the killers of manliness....air, among the restorers of the sign of life; fire (i.e. cauterisation) among the alleviatives of stypsis due to undigestedness, cold, colicy pain, and tremor; water among the styptics;...eating too much, among the causatives of the morbidity of indigestion.....timely meals, among the causatives of health; (affording) satisfaction, among the qualities of the food; suppression of natural urges, among the causatives of ill-health,....heavy meals, among the causatives of morbid post-assimilatory effects; one meal a day, among the causatives of happy effect,.....non-eating, among the reducers of life-span; taking very little food, among the slimmers; indigestedness and over-eating, among the morbidities of colon; eating contrary food, among the causatives of the imbalance in the digestive fire; eating food of opposite virility, among the causatives of despicable diseases; calmness (of mind), among the salutaries; fatigue, among all of the unsalutaries; defective (lit. false) engagement (nutritional or psychological), among the causatives of diseases.....distress, among the promotives of disease; bathing, among the removers of fatigue; joy, among the pleasings; grief, among the dessicatives,....taking foods of all tastes habitually, among the strengtheners; taking foods of only one taste habitually, among the weakeners; doing as ordered, among the qualities of a patient; physician, among the organs of medication; non-believers, among the abandonables; too much indulgence, among the distress causatives,... a group of physicians, among the causatives of doubtlessness; skilfulness in work, among the qualities of the physician; specialist's knowledge, among the drugs; logical reasoning supported by technical knowledge, among the means of accomplishements; proper practicing of what ought to be done, among the advantages of the sense of time; not-doing the work at all, among the causatives of procrastination; personally seeing the work done by others, among the causatives of doubtlessness; incapability, among the causes of getting freightened : conversation with experts, among the promotives of intellect; preceptor, among the causatives of understanding a technical treatise; (the science of) ayurveda, among the ambrosia; good words among the practicables; prejudice, among all that is unwholesome and renunciation of everything among what causes happiness. Cs. su. 25. 40

c. *nutrition*:

13. विविधमशितं पीतंलीढं खादितं जन्तोर्हितमन्तरग्नि सन्धुक्षितबलेन यथास्वेन उष्मणा सम्यग्विपच्यमानं कालवदनवस्थित सर्वधातु पाकमनुपहत सर्वधातूष्म मारुतस्रोतः केवलं शरीरमुपचय बल वर्ण सुखायुषा योजयति शरीरधातूनूर्जयति च। धातवो हि धात्वाहारः प्रकृतिमनुवर्तन्ते।

(*the process* :) The diverse kinds of wholesome food, viz., the eaten, the drunk, the licked and the gulped (varieties) on being well digested by the strength

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inflammed by the inner (gastric) fire and by means of the heat proper to the substance concerned, imbues the entire body wherein the metabolic processes of all the body elements are ceaselessly going on like the (very) process of time (which also can never be stopped) and wherein the circulation of the transport elements, the body heat and the neurological sensitivities are (all) maintained unimpeded in the body channels concerned--with growth, strength, complexion and life; and also replenshes the body-elements (as they wear out). It is by being nourished with corresponding (nutritive) elements that the body elements are able to maintain the body (as such) in the normal condition (of health).

तत्र आहार प्रसादाख्यो रसः किट्टं च मलाख्यमभिनिवर्तते।
किट्टात् स्वेद मूत्र पुरीष वात पित्त श्लेष्माणः कर्णाक्षिनासिकास्य लोमकूप प्रजनन मलाः केशश्मश्रुलोम नखादयश्च अवयवाः पुष्यन्ति।

Therein, (i.e. at the end of nutrition), an useful product of the food designated as the assimilable nutritive fluid or the *rasa* and a waste produce, *kiṭṭa* called the impurity or *mala* come about. From *kiṭṭa* are produced and fed sweat, urine, faeces, (the three vitiations) *vāta, pitta* and *śleṣma* as well as the impurities of the ears, eyes, nose, mouth, hair follicles and the generative organs and also parts of the body like the hairs of the head and the beard, hairs of the body, nails and the like.

पुष्यन्ति त्वाहार रसाद्रस रुधिर मांसमेदोस्थिमज्ज शुक्रौजांसि पंचेन्द्रिय द्रव्याणि धातु प्रसादसंज्ञकानि शरीर सन्धिबन्धपिच्छादयश्च अवयवाः। ते सर्व एव धातवो मलाख्याः प्रसादाख्याश्च रसमलाभ्यां पुष्यन्तः स्वं मानमनुवर्तन्ते यथावयः शरीरम्।

From the assimilable nutritive fluid are produced and fed the *rasa*, the blood, the flesh, the fat, the bone, the marrow, the semen and the vital essence or the *ojas*. The material of the five sensory organs called *the* grace of the body elements as also such parts of the body as body joints, ligaments, mucin, etc. are nourished by the *rasa* of the food only. All of these constituents (of the body) whether called the impurities or the beneficients, being nourished by formation of impurities or the release of beneficiary substances respectively, follow the age and the constitution of the individual person concerned in the quantities of their production. Ca. su. 28. 3,4

14. तेषां तु मल प्रसादाख्यानां धातूनां स्रोतांसि अयनमुखानि। तानि यथाविभागेन यथास्वं धातूनापूरयन्ति।

For these constituents in the body called the impurities or the beneficients, the course of transport is in accordance with the channel concerned (i.e. these channles are separate to both ?) These latter (channels) fill up the body elemets (either with the impurities or the beneficients, as the case may be) in accordance with their respective (anatomical) divisions or the lay out and their respective (physiological) nature. Cs. su. 28. 5

15. अजातानमनुत्पत्तौ जातानां विनिवृत्तये। रोगाणां यो विधिर्दृष्टः सुखार्थी तं समाचरेत्।।

(*nutritional care as a guidance for health*)

One desiring one's own happiness who has seen the regulations (as expounded so far for taking care in matters of nutrition) should follow them well so as not to

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give scope for the birth of the diseases that have not yet come and to turn back the diseases that have already set in. Cs. su. 28. 34.

16. सुखार्थाः सर्व भूतानां मताः सर्वा प्रवृत्तयः । ज्ञानाज्ञानविशेषात् मार्गामार्ग प्रवृत्तयः ।

All activities of all beings are meant to secure happiness. But it is the speciality of the (presence of) knowledge or ignorance that decides here as to whether the activity chosen is in the right or the wrong path.

हितमेव अनुरुध्यन्ते प्रपरीक्ष्य परीक्षकाः । रजोमोहावृतात्मानः प्रियमेव तु लौकिकाः ।।

(That is why,) an investigative person takes up only that which is wholesome after full scrutiny. But, a lay person (takes up) merely that which pleases him since his faculties are clouded because of passion and delusion. Cs. us. 28. 35, 36.

श्रुतं बुद्धिः स्मृतिर्दाक्ष्यं धृतिर्हित निषेवणम् । वाग्विशुद्धिः शमो धैर्यमाश्रयन्ति परीक्षकम् ।।
लौकिकं नाश्रयन्तेते गुणाः मोहरजः श्रितम् । तन्मूला बहवो यान्ति रोगाः शारीरमानसाः ।।

Knowledge of the texts, intellect, power of memory, capability, fortitude, recourse only to the wholesome, purity in speech, tranquility and bravery reside in a scrutinising person. These qualities are not present in the laymen sheltered as they are in their own passion and delusion; with *this* as the source, many diseases set in - physical as well as mental. Cs. su. 28. 37, 38.

प्रज्ञापराधात् हि अहितानर्थान् निषेवते । संधारयति वेगांश्च सेवते साहसानि च ।।
तदात्व सुख संज्ञेसु भावेषु अज्ञोऽनुरज्यते । रज्यते न तु विज्ञाता विज्ञाने हि अमलीकृते ।।

It is indeed by wilful transgression (i.e.. there is no compulsion for them to do so, apart from their own will) that a person practices what is unwholesome as regards their five sensibilities, suppresses the (unsuppressible) natural urges and also takes to adventurisms. (It is) the ignorant person (who) gets a liking in what looks as if it is happy immediately (but is unwholesome in the long run). But a person who knows and whose informedness is well clarified, will not like them. Cs. Su. 28, 39, 40.

17. न रागात् नापि अविज्ञानादाहारानुपयोजयेत् । परीक्ष्य हितमश्नीयात् देहोहि आहारसंभवः ।।
आहारस्य विधावष्टौ विशेषा हेतु संज्ञकाः । शुभा शुभ समुत्पत्तौ तान् परीक्ष्य प्रयोजयेत् ।।

One should not consume an article of food either by an attachment to it born of passion or due to ignorance. One should eat the wholesome (only) after full scrutiny. For, a body is born of the food (one consumes). Eight are the regulations in matters of food (see next section) and these are the reasons *per se* in causing the good and the bad. One should use them after investigation (according to these criteria). Cs. su. 28. 41, 42.

18. तत्र खलु इमानि अष्टावाहार विधि विशेषायतनानि भवन्तिः तद्यथा- प्रकृति करण संयोग राशिदेशकालोपयोग संस्थोपयोक्त्रष्टमानि ।

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(*dietetic criteria* :) Therein, these are the eight factors needing special consideration in (understanding and managing) the prescribed procedure of diet and dietetics. They are : natural qualities, preparation, combination (and) quantum (of the articles of diet), (time of procurement) region and stage, (of disease, to which the diet is meant), procedure of use and the user. Cs. vi. 121.

19. तत्र प्रकृतिरुच्यते स्वभावो यः, स पुनः आहारौषध द्रव्याणाम् स्वाभाविको गुर्वादिगुण योगः, तद्यथा - माष मुग्दयोः शूकरैणयोश्च।

Among these, natural qualities are the innate properties (of the substances used in dietetics). By this is meant the natural properties such as heaviness and the like of the substances used as food; for instance, (the heaviness of) blackgram and pork and (the lightness of) green gram and vension.

20. करणं पुनः स्वाभाविकानां द्रव्याणामभिसंस्कारः। संस्कारो हि गुणान्तराधानमुच्यते।
ते गुणाः तोयाग्नि सन्निकर्ष शौचमन्थन देशकाल वासन भावनादिभिः काल प्रकर्ष भाजनादिभिः च आधीयन्ते।

Preparation is the process of culinary rendering of the natural substances; this rendering is (in fact) a transmutation of the qualities. These (new, or, emergent) qualities get established by (mixing the article of diet with) water (and other processes on it, such as) application of heat, clarification, churning; place (of origin); the flavouring; impregnation or reinforcement as well as the length of time (over which it is kept, etc.), the vessels (used) and the like.

21. संयोगः पुर्नद्व्योर्बहूनां वा द्रव्याणां संहती भावः, स विशेषमारभते, यं पुनः एकैकशो द्रव्याणि आरभन्तेः तद्यथा-मधु सर्पिषोः मधुमत्स्यपयसां च संयोगः।

Combination is putting together of one or more substances. This (itself) commences a special (property) which none of the constituents would have started (individually). For instance, the combination of honey and ghee (both of which are wholesome when taken alone, but toxic when combined) or the combination of honey, fish and milk (which are individually wholesome but toxic if combined).

22. राशिस्तु सर्वग्रह परिग्रहौ मात्रामात्र फल विनिश्चयार्थः। तत्र सर्वस्य आहारस्य प्रमाण ग्रहणं एक पिण्डेन सर्वग्रहः सर्वतश्च ग्रहः परिग्रह उच्यते।

Quantum is the measure of the total mass (of the food intake) and of each of the constituent therein in order to determine the effects of the right and the wrong doses (needed for the occasion). The measuring of each and every one of the individual dietary substance is the detailed measurement or assay. Measuring all together is total measurement; measuring it in all ways (i.e. its parts separately) is detailed measurment.

23. देशः पुनः स्थानं, स द्रव्याणामुत्पत्ति प्रचारौ देश सात्म्यं च आचष्टे।

Place is the site; this indicates the place of production, abundant use and regional compatibility (of the article of food in question).

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24. कालो हि नित्यगश्च अवस्थिकश्चः
तत्र अवस्थिको विकारमपेक्षते नित्यगस्तु ऋतु सात्म्यापेक्षः ।

Time is what is always fleeting and what is pertaining to a particular stage (*to the patient, to whom a specific diet is to be prescribed, for instance*); therein, the latter is used (i.e. is relevant) in relation to a particular disease and the former to seasonal compatibilities (*for the particular person and the particular* food, for instance).

25. उपयोगसंस्था तु उपयोगनियमाः, स जीर्णलक्षणापेक्षः ।

Procedure of use is the rule of use; this is determined by the characteristics of digestion (of the user or the patient).

26. उपयोक्ता पुनर्यस्तमाहारमुपयुङ्क्ते, यदायत्तमोकसात्म्यम् ।
इत्यष्टावाहार विधि विशेषायतनानि व्याख्यातानि भवन्ति ।।

User is he who utilises the food and on whom depends the compatibility or the habituation. Thus have been commented the eight special factors on diet and dietetics.

27. एषां विशेषाः शुभा शुभफलाः परस्परोपकारका भवन्तिः
तान् बुभुत्सेत बुद्ध्वा च हितेष्सुरेव स्यात्; न च मोहात् प्रमादाद्वा प्रियमहितमप्युखोदर्कं उपसेव्यमाहारजातं अन्यद्वा किंचित् ।।

These different factors give rise to good and evil effects and are (also) helpful to one another. One should try to know them and having known them, one should be desirous of only the wholesome (among them). Neither out of negligence nor out of ignorance should one make use of any article of diet or any other thing which is pleasant but unwholesome and fraught with unhappy consequences. Cs. vi. 1.23.

28. तत्र इदं आहार विधि विधानं अरोगाणां आतुराणां चापि केषां चित् काले प्रकृत्यैव हिततमं भुंजानानां भवति ।

Therein, this is the dietetic rule and the procedure for those who are healthy as well as for certain types of patients concerning the taking of food that is wholesome, in time and according to their individual constitution :

उष्णं स्निग्धं मात्रावत् जीर्णे वीर्याविरुद्धम् इष्टे देशे इष्ट सर्वोपकरणं नातिद्रुतं नातिविलम्बितं अजल्पन् अहसन् तन्मनाभुंजीत,
आत्मानमभीक्ष्य सम्यक् ।

One should eat food which is hot (and) unctuous (and do so) in due measure, after digesting the previous food. (The food should be) non-antagonistic in potency (and taken) in a congenial place (that is) provided with all the pleasant accesories. (It should be taken) neither too hurriedly, nor too slowly, neither chattering on nor laughing (all the while) and with all concentration on the food and scrutinising one's own interests (of nutrition) properly. Cs. vi. 1.24

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29. तस्य सादगुण्यमुदेक्ष्यामः

We shall indicate the beneficial accompaniments for every one of these (specifications of good eating, as below).

30. उष्णमश्नीयात्; उष्णं हि भुज्यमानं स्वदते भुक्तं अग्निमौदर्यमुदीरयति क्षिप्रं जरा गच्छति वातमनुलोमयति श्लेष्माणं च परिहासयतिः तस्मादुष्णमश्नीयात्।

(*the 'rules' for eating* :) One should eat hot. It is the food eaten hot, that is relished; on being consumed, it excites the gastric fire; gets digested quickly, (is) condusive for *vāta* action (i.e. stimulates peristaltic movement ?), breaks up the mucus in gastric secretion. Therefore, one should eat food that is hot.

31. स्निग्धमश्नीयात्; स्निग्धं हि भुज्यमानं स्वदते भुक्तं चानुदीर्णमग्निमुदीरयति क्षिप्रं जरां गच्छति, वातमनु लोमयति शरीरमुपचिनोति दृढी करोति इन्द्रियाणि बलाभिवृद्धिमुपजनयति वर्ण प्रसादं च अभिनिर्वर्तयतिः तस्मात् स्निग्धमश्नीयात्।

One should eat (food that is) unctuous. It is the food that is unctuous which is relished; on being consumed, it excites (even) the inactive gastric fire; gets digested quickly, (is) conducive for *vāta* action; (it) nourishes the body well, strengthens the sense organs, generates an increase in strength and vigour, and brightens the complexion. Therefore one should eat unctuous food.

32. मात्रावदश्नीयात्; मात्रावद्धि भुक्तं वातपित्त कफानपीडयदायुरेव विवर्धयति केवलं सुखं गुदमनुपर्येति न च उष्माणमुपहन्ति अव्यथं परिपाकमेतिः तस्मान्मात्रावदश्नीयात्।

One should eat in measure. It is the food eaten in measure that exclusively promotes life without disturbing the balance of *vata, pitta* and *kapha*; (it) is easily passed down to the rectum, does not upset the gastric fire and gets assimilated without causing any pain. Therefore one should eat in measure. (3)

33. जीर्णे अश्नीयात्; अजीर्णेहि भुंजानस्याभ्यवहृतमाहारजातं पूर्वस्याहारस्य रसमपरिणतमुत्तरेण आहार रसेनोपसृजत् सर्वान् दोषान् प्रकोपयत्याशु जीर्णे तु भुंजानस्य स्वस्थानस्थेषु दोषेषु अग्नौ चोदीर्णे जातायां च बुभुक्षायां विवृतेषु च स्रोतसां मुखेषु विशुद्धे चोद्गारे हृदये विशुद्धे वातानुलोम्ये विसृष्टेषु च वात मूत्र पुरीषवेगेषु अभ्यवहृतमाहारजातं सर्व शरीर धातूनप्रदूषयत् आयुरेव अभिवर्धयति केवलंः तस्मात् जीर्णे अश्नीयात्।

One should eat after the previous food is digested. The food that is eaten when (the previous food remains) undigested, mixes up the unfinished chyme of the previous food with the chyme of the subsequently coming chyme (viz, of itself) (and thus) immediately provokes all the vitiations. In the food taken when the previous meal has been fully digested, the vitiations have returned to their normal places, the gastric fire is kindled, hunger is born, the channels (of transport) are clear and open, the belching from the mouth is healthy, the heart (inclination to eat ?) is clear and pure, the neurological sensitivities (viz. *the peristaltic movement*?) are normal, the urges for evacation of flatus, urine and faeces are all well attended to - such a food services the sole purpose of promoting life without vitiating any of the body elements. Therefore one should eat (on an empty stomach) when the previous food is digested.

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34. इष्टे देशे इष्टसर्वोपकरणं च अश्नीयात्, इष्टे हि देशे भुंजानो नानिष्टदेशजैर्मनोविकारैः भावैर्मनोविघातं प्राप्नोति यथैवेष्टैः सर्वोपकरणैः तस्मादिष्टे देशे तथा इष्ट सर्वोपकरणं च अश्नीयात्।

One should eat in a congenial place provided with all the pleasant accessories. On eating in a congenial place, (one) will not get the mental impediments and depressions by the emotions that are born in uncongenial places and cause mental distractions. Similar (is the case) with the appurtenances. Therefore., one should eat in a congenial place with all the pleasant accessories.

35. नाति द्रुतमश्नीयात्; अतिद्रुतं हि भुंजानस्योत्सेहनमवसादनं भोजनस्य अप्रतिष्ठानं च भोज्य दोष साद्गुण्योपलब्धिश्च न नियता, तस्मान्नातिद्रुतमश्नीयात्।

One should not eat too hurriedly. By eating hurriedly, the food is liable to go the wrong way or injure the health or get placed improperly, and there is no appreciation of either the bad or the good qualities of the food. Therefore one should not eat too hurriedly.

36. नातिविलम्बितमश्नीयात्, अतिविलम्बितं हि भुंजानो न तृप्तिमधिगच्छति, बहु भुङ्क्ते शीती भवति आहार जातं विषमं च पच्यते; तस्मान्नातिविलम्बितमश्नीयात्।

One should not eat too slowly. One eating too slowly will not get satisfied (even if) he eats much. The food gets cold and it gets digested irregularly. Therefore one should not eat too slowly.

37. अजल्पन् अहसन् तन्मना भुंजीत; जल्पतो हसतोऽन्यमनसो वा भुंजानस्य त एव हि दोषा भवन्ति, य एव अतिद्रुतमश्नतः, तस्मादजल्पन् अहसन् तन्मना भुंजीत।

One should eat without prattling about or laughing (all the while) and with full concentration. One who prattles on, laughs and is preoccupied while eating is liable to suffer the same disorders as the one who eats too quickly. Therefore one should not prattle or laugh while eating but should eat with full concentration.

38. आत्मानमभिसमीक्ष्य भुंजीत सम्यक्; इदं ममोपशेते इदं नोपशेत इत्येवं विदितं हि अस्यात्मन आत्मसात्म्यं भवति; तस्मादात्मानमभिसमीक्ष्य भुंजीत सम्यगिति।

One should eat with due regard to one's constitution - "This food will agree with me and this will not"; if this is understood, one can determine what is compatible to oneself. Therefore one should eat with due regard to one's constitution. Cs. vi. 1.25

39. रसान् द्रव्याणि दोषांश्च विकारांश्च प्रभावतः। वेद यो देशकालौ च शरीरं च स नो भिषक्।।

(*dietetician or dietetic physician* :) Him do we regard as the (dietetic) physician who understands the effects and actions of the tastes, the dietetic substances, the humors and the diseases as well as the factors of clime, season and the body (operating in all this). Cs. vi. 1.26.

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40. त्रिविधं कुक्षौ स्थापयेदवकाशांशमाहारस्याहारमुपयुंजानः, तद्यथा-एकमवकाशांशं मूर्तानामाहारविकाराणाम्, एकं द्रवाणां एकं पुनर्वातपित्त श्लेष्मणाम्, एतावतीं हि आहारमात्राम् उपयुंजानो नामात्राहरजं किंचिदशुभं प्राप्नोति।

(*specific determination of the measures of the stomach capacity* :) One about to eat a meal should dispose the quantum of his stomach capacity for food into three parts; this is as follows : one quantum capacity for solid food-stuffs, one for the liquids and one for the full play of the *vāta, pitta* and *kapha* . Consuming the measure of food in conformity to this rule, one is not liable to any of the ill effects from eating without measure . Cs. vi. 2.3.

41. न च केवलं मात्रावत्वादेवाहारस्य कृत्स्नमाहारसौष्टवमवाप्तुं शक्यं प्रकृत्यादीनाम् अष्टानामाहारविधिविशेषायतनानां प्रविभक्तफलत्वात्।

तत्रायं तावदाहार राशिमधिकृत्य मात्रामात्राफल विनिश्चयार्थः प्रकृतः। एतावानेव हि आहार राशिविधिविकल्पो यावन्मात्रावत्वममात्रावत्वं च।

However, it is not possible to obtain the full excellence accruing from food by merely confirming to the rule of measure, because all the eight factors of diet and dietetics beginning from the nature of the diet onwards have their own individual contribution to make, in the final result. Here, however, we are concerned with determining the result of the quantum of food *in* measure and *out of* measure. The whole of the dietetic mode as regards quantum resolves itself into *such a consideration of* food taken in measure and food taken out of measure. Cs. vi. 4,5

42. (तत्र मात्रावत्वं पूर्वमुद्दिष्टं...अनुव्यख्यास्यामः। तद्यथा-)

कुक्षेरप्रपीडामाहारेण हृदयस्यानवरोधः पार्श्वयोरवि पाटनं अनतिगौरवमुदरस्य प्रीणनमिन्द्रियाणाम् क्षुत्पिपासोपरमः स्थानासन शयन गमनो च्छ्वास प्रश्वास हास्य संकथासु सुखानु वृत्तिः सायं प्रातश्च सुखेन परिणमनं बलवर्णोपचयकरत्वं च।

The following are the signs of food eaten in measure : freedom from distress in the stomach (as a result of the quantity of the food taken); absence of any cardiac discomfort; non-distension of the sides; no excessive heaviness in the stomach; gratification of the senses; a sense of ease and happines while standing, sitting, lying down (or) walking (and in) exhalation and inhalation (of breath, and in) repartee and conversation; an easeful digestion and assimilation of food in the evening and morning and, an imparting of strength, complexion and well-nourishedness. Cs. vi. 2.6

43. अमात्रावत्वं पुनर्द्विविधमाचक्षते-हीनं अधिकं च। तत्र हीनमात्रमाहार राशिं बलवर्णोपचय क्षयकरमतृप्ति करम् उदावर्तकरम् नायुष्य वृष्यमनौजस्यं शरीरमनो बुद्धि इन्द्रियोपघातकरं उदावर्तकरं वात विकाराणामायतनं आचक्षते। अतिमात्रं पुनः सर्वदोष प्रकोपणमिच्छन्ति कुशलाः।

Eating food out of measure is spoken to be of two kinds : the deficient and the excessive. The deficient measure of food is seen to result in the impairment of strength, complexion and good nourishment; in want of satisfaction; in misperistalsis and the impairment of the functions of life, virility and vitality, body, mind, understanding and senses; in the vitiation of the eight body-elements; in inducing inauspicious conditions and in the incidence of the (eighty kinds of the) *vāta* disorders. The experts aver that the diet which is excessive in measure is provocative of all the three vitiations. Cs. vi. 2.7.

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44. न च खलु केवलमति मात्रमेवाहारराशिमामप्रदोषकरमिच्छन्ति अपितु खलु गुरु रूक्ष शीत शुष्क द्विष्ट विष्टम्भि विदाह्याशुचि विरुद्धानामकाले च अन्नपानानामुपसेवनं काम क्रोध लोभ मोहेर्ष्याह्री शोक मनोद्वेग भयोपतप्तमनसा वा यदन्नपानमुपयुजयते तदपि आममेव प्रदूषयन्ति।

It is not that the excessive intake of food alone that is responsible for setting up the ills of disorders in chyme. The following factors too induce the chyme-disorders - the untimely indulgence in food and drinks that are heavy, dry, cold, dehydrated, hateful, retardant, irritant, unclean, and counteracting or eating and drinking while the mind is afflicted with lust, anger, greed, infatuation, envy, shame, grief, indignation, anxiety and fear. Cs. vi. 2.8

45. मात्रयाऽप्यभ्यवहृतं पथ्यं चान्नं न जीर्यते। चिन्ता शोक भय क्रोध दुःख शय्या प्रजागरैः।

The food eaten by one who is given to brooding, sorrow, fear, anger, grief, sedentary habits or to keeping awake at night, though it be the prescribed diet and is eaten with strict regard to the measure (of intake) will fail to be digested properly. Cs. vi. 2.9

46. तं द्विविधमामप्रदोषमाचक्षते भिषजः - विसूचिकाम् अलसकं च।
तत्र विसूचिकामूर्ध्वं चाधश्च प्रवृत्तामदोषां यथोक्त रुपां विद्यात्।

(*nutritional disease, an illustration* :) The physicians speak about two kinds of disorders due to undigested food remaining in the stomach, or the chyme disorders viz. acute alimentary irritaion and intestinal torpor. Therein, the expulsion of the undigested food either through the upper or the lower alimentary channels with the symptoms already mentioned should be known as the acute alimentary irritation or *visūcika* (that which spreads and pricks like a needle). Cs. vi. 2, 10, 11.

47. अलसकमुपदेक्ष्यामः - दुर्बलस्याल्पाग्नेर्बहु श्लेष्मणो वात मूत्रपुरीषवेगविधारिणः स्थिरगुरुबहु रुक्षशीतशुष्कान्नसेविनस्तदन्न पानमनिल प्रपीडनं श्लेष्मणा च विबद्धमार्गमतिमात्र प्रलीन मलसत्वान्न बहिर्मुखी भवति ततश्छर्द्यतिसारवर्ज्यान्याम प्रदोष लिंगान्यभिदर्शयत्यति मात्राणि। अति मात्र प्रदुष्टामबद्धमार्गास्तिर्यगच्छतः कदाचिदेव केवलमस्य शरीरं दण्डवत् स्तम्भयन्ति ततस्तं दण्डालसकमसाध्यं ब्रुवते।

We shall now expound the intestinal torpor or *alasaka* (that which causes a languidity). In a weak man, of feeble digestive power, of *kapha* habitus, habitually given to suppress the urges of flatus, urine and faeces, but given to eating food which is firm, heavy, large in quantity, dry, cold and dehydrated, such a food and drink, though painfully urged on by peristalsis cannot find an outlet, as it gets inert owing to the passages being obstructed by the accumulated *kapha* and the food mass being jammed inside. Then, the symptoms of general indigestion excepting vomiting and purging, manifest themselves in a very aggrieved form. The vitiations becoming extremely morbid finding that exit is closed at both ends by the vitiated undigested mass, tends to spread sideways and then, not infrequently cause the whole of the body to become rigid like a stick. This is spoken of as *dandālasaka* (a staff like rigidity) and is incurable.

विरुद्धाध्यशनाजीर्ण शीलिनः पुनरामदोषमामविषमित्याचक्षते भिषजः विषसदृश लिंगत्वात्; तत् परमसाध्यम्, आशुकारित्वात् विरुद्धोपक्रमत्वाच्चेति।

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47. The chyme disorder that occurs in those who are habituated to eat incompatibly, over and over again or in an undigested state, is considered a toxin (the intestinal toxemia) by the physicians, because it has all the symptoms of a poison. This is absolutely irredeemable because of its fulminating character and also because of the antagonism in the lines of treatment indicated. Cs. vi. 2.12

48. सर्व विकाराणामपि च निग्रहे हेतुव्याधिविपरीतमौषधमिच्छन्ति कुशलाः; तदर्थकारि वा।

a general guideline for treatment. In the conquest of all diseases, the expert physicians desire a drug that is antagonistic to the morbifying as well as the morbid factors or anything else that serves the same purpose. Cs. vi. 2.12

49. मात्राशी स्यात्। आहारमात्रा पुनरग्निबलापेक्षिणी।
यावत् हि अस्य अशनमशितमनुपहत्य प्रकृतिं यथाकालं जरां गच्छति तावदस्य मात्रा प्रमाणं वेदितव्यं भवति।

(*a precaution* :) One must eat in measure but this measure of food is determined by the strength of one's (individual) digestive capacity. That much (food), which when eaten is digested in due time without impairing one's constitution, is to be considered as the proper measure (of its intake). Cs. su. 5, 3, 4

50. न तत्र चैवमुक्ते द्रव्ये गुरुलाघवमकारणं मन्येतः लघूनि हि द्रव्याणि वाय्वग्निगुण बहुलानि भवन्ति पृथ्वी सोमगुण बहुलानि इतराणि तस्मात् स्वगुणादपि लघून्यग्निसंघुक्षणस्वभावान्यल्पदोषाणि च उच्यन्तेऽपि सौहित्योपयुक्तानि गुरुणि पुनर्नाग्नि संघुक्षण स्वभावान्यसामान्यात्, अतश्च अतिमात्रं दोषवन्ति सौहित्योपयुक्तान्यन्यत्र व्यायामाग्निबलात्ः सैषा भवति अग्निबलापेक्षिणी मात्रा।

(*a general directive* :) One should not conclude that the heaviness and the lighness in the several articles of food, as mentioned (in the list of specific examples given above), is of no particular consequence (lit. reason). For, the light foods have a predominance of the qualities of air and fire, (while) the others (i.e. the heavy foods) have more of the qualities of earth and water. Consequently, the light foods are stimulative of gastric fire by their innate quality and are spoken to be of least harm even if eaten to a surfeit. The heavy foods on the other hand are by nature non-stimulative of the gastric fire due to their dissimilarity (with the factor of time). Therefore, these are markedly harmful, when used in a surfeit, excepting in cases where the gastric fire is augmented by hard exercise. Cs. su. 5.6

51. न च नापेक्षते द्रव्यं, द्रव्यापेक्षया च त्रिभाग सौहित्यमर्ध सौहित्यं वा गुरुणाम् उपदिश्यते लघूनामपि च नातिसौहित्यमग्नेर्युक्त्यर्थम्।

(Though the aspect of quality is important as above) it is not that the (aspect of) quantity of the (food) material does not count. From the point of quantity, it is laid down that heavy foods should be taken in one third or one half measure of the full meal, and even light foods should not be taken in excess but (they) should accord with the strength of the gastric fire.

मात्रावत् हि अशनमशितमनुपहत्य प्रकृतिं बलवर्णसुखायुशा योजयति उपयोक्तारमवश्यमिति।

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The food taken in proper measure (in reference to quality as well as quantity, as stated above), not only does not impair one's health but positively and necessarily promotes one's strength, complexion, happiness and life. Cs. su. 5. 7,8

52. तस्य अशिताद्याहाराद्बलं वर्णश्च वर्धति। यस्यर्तुसात्म्यं विदितं चेष्टाहार व्यपाश्रयम्।

(*seasonal criteria* :) It is by the eating of food by him who knows the campatibility of foods to the season (in question) as well as (his own) activity that strength as well as colour and complexion of the body increases. Cs. su. 6.3.

53. हिताशी स्यान्मिताशी स्यात्काल भोजी जितेन्द्रियः। पश्यन् रोगान् बहून् कष्टान् बुद्धिमान् विषमाशनात्।।

By seeing the many diseases and the difficulties that arise by eating unequably, the wise person should eat what is wholesome, eat within limits and eat in time and be in control of his senses. Cs. ni.

स यदा दुर्बलो जन्तुः सेवते विषमाशनम्। भुंजानस्यास्य विषमं वैषम्यं यान्ति धातवः।।
ततः पुरीषमेव वर्धयत्यस्य भोजनम्। नावाप्नोति रसं देहे विकृतस्येव देहिनः।।
रसे निवृत्ते तस्याथ ज्वरः कासश्च जायते। ज्वरः सीदति चाप्यस्य निष्टीवति स शोणितम्।।
अथवाप्यवशो जन्तुः शश्वत्स परिहीयते। इत्येभिर्लक्षणैर्विद्याद्विषमाशनजं क्षयम्।।
यस्मादर्थी शरीरार्थं रस भोजनमिच्छति। शरीरापेक्षया तस्मादाहारं सुसमाचरेत्।।

When a weak (minded) person takes to unequable eating, his constituents will also attain an unequableness in this man who continues to eat such non-compatible foods. Then his whole meals would render only waste-matter (lit. *purisa* - the stools) to thrive. (And,) his body would not therefore secure the nourshing nutrient fluids, as it is itself denatured in this man. When nutrient fluids are not available, then would arise fever and coughing. His voice would sink down and he may even vomit accompanied with blood or the creature would give himself up (as lost) helplessly and without any control. (In fact,) it is by such characteristics as these one should diagnose consumption due to incompatible food.

It is because of these reasons, he who desires nourishing food for the sake of the body should take to proper and equable eating in the interest of his own body. Bhela. ni. 2. 15-19.

54. तस्यशिताद्यादाहाराद् बलं वर्णश्च वर्धति।
यस्यर्तुसाग्यं विदितं चेष्टाहार व्यापाश्रयम्।।

Strength and complexion (of the body) prospers by eating that type of food which is eaten after knowing its compatibilities to the seasons and in accordance with the general mode of life of the person and his habitual food habits. Cs. su. 6.3

55. आदावन्ते च दौर्बल्यं विसर्गादानयो नृणाम्। मध्ये मध्यं बलंत्वन्ते श्रेष्टमग्रे च निर्दिशेत्।

There will be a (general) weakness in the strength of man at the beginning of the period of nutrition or liberation (rainy season) and the end (summer season) of the period of low nutrition or absorption; this strength will be of medium kind at the middle of the period of liberation (autumn season) and will be most excellent at the

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end of the period of liberation (autumn season) and the beginning of the period of low nutrition (winter season). CS. su. 6.8 (after this are given the dietetic regimens for different seasons).

56. इत्युक्तमृतु सात्म्यं यच्चेष्टाहारव्यपाश्रयम्। उपशेते यदौचित्यात् ओकसात्म्यं तदुच्यते।

Thus has been stated the seasonal homologation which has its basis in the general mode of life of the person and his food habits. That which gets homologous by sheer continued use, though in itself it is not so, that is called an ecological or an acquired homologation. Cs. su. 6.49.

57. देशानामामयानां च विपरीतगुणं गुणैः। सात्म्यमिच्छन्ति सात्म्यज्ञाश्चेष्टितं चाद्यमेव च।

For the geographical regions as well as the disease, those who know what is homologation, consider what is contrary in its qualities, either for the mode of life or the foods habits (for the person concerned) as homologous. Cs. su. 6.50

d. *from authors other than Caraka*

58. आहारादेव अभिवृद्धिर्बलमारोग्यं वर्णेन्द्रिय प्रसादश्च, तथाहि आहार वैषम्यादस्वास्थ्यम् तस्य अशित पीत लीढखादितस्य नानाद्रव्यात्मकस्य अनेकविध विकल्पस्य अनेकविधप्रभावस्य पृथक् पृथक् द्रव्य रस गुण वीर्य विपाक कर्माणि इच्छामि ज्ञातुं न हि अनवबृद्धस्वभावा भिषजः स्वस्थानुवृत्तिं रोगनिग्रहणं च कर्तुं समर्थाः,

आहारायत्ताश्च सर्वप्राणिनो यस्मात्
तस्मादन्नपानविधिमुपदिशतु मे भगवान्।

It is from food alone, (there will ensue) growth, strength, health, and the gracefulness of colour and complexion (of the body as well as, of) the sense organs, and, similarly, from the imbalance of food, (there will come about) ill-health.

Of these foods, that are gulped, drunk, licked and eaten, made up of varied types of materials, having manifold alternatives, and multifarious influences, I desire to know every individual one of the actions based on their gross material, taste, quality, potency and post-assimilatory effect. Physicians who do not know the nature (of thse factors) will not be capable of bringing about maintenance of health or the destruction of disease. Since all living beings are controlled by food, kindly teach me revered Sir, the regulations concerning foods and drinks. Ss. us. 46.3

59. संप्रवक्ष्यामि अतश्चोर्ध्वं आहारगति निश्चयम्।

From now onwards, I shall tell you about the determination of the fate of the food (in the body).

पंचभूतात्मके देहे हि आहारः पांचभौतिकः।
विपक्वः पंचधा सम्यग्गुणान् स्वानभिवर्धयते।।

In the body that is made up of the five primoridal elements, the food (consumed) is (also) of the nature of the five primordial elements. After assimilation, the food makes their own five respective qualities (within the body) flourish properly.

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अविदग्धः कफं पित्तं विदग्धः पवनं पुनः ।
सम्यग्विपाक्वो निःसार आहारः परिबृंहयेत् ।।

Undigested food excessively augments the *kapha* vitiation (within the body); (so does) the excessively digested food, the *pitta*; the properly digested food, that does not have any further essence augments the *vāta*. Ss. su. 46. 525-527.

60. अथ आहार विधिं वत्स विस्तरेण अखिलं श्रृणु।
आप्तास्थितमसंकीर्णं शुचिं कार्यं महानसम् ।।
तत्राप्तैर्गुण संपन्नं भक्ष्यमन्नं सुसंस्कृतम् ।
शुचौ देशे सुसंगुप्तं समुपस्थापयेत भिषक् ।।
विषघ्नैः अगदैः स्पृष्टं प्रोक्षितं व्यंजनोदकैः ।
सिद्धैर्मन्त्रैः हतविषं सिद्धमन्नं निवेदयेत् ।।
वक्ष्यामि अतः परं कृत्स्नमाहारस्य उपकल्पनाम् ।
घृतं काष्णायिसे देयं पेया देया तु राजते ।।
....
एवं विज्ञाय मतिमान् भोजनस्य उपकल्पनाम् ।
भोक्तारं विजने रम्ये निःसंपाते शुभे शुचौ ।।
सुगन्धपुष्प रचिते समे देशे च भोजयेत् ।

Listen to the methodology of taking food dear, the entirety of it and in (all its) elaboration. The kitchen should be served with the trustworthy (personnel only). It should not be congested and it should be clean. The food should be served sprinkled with poison-killing antidotes and the waters that would act on side dishes (also;) its poison, destroyed by the incantations of the accomplished sages as well. I shall now tell you how to arrange the entire variety of the foods (to be served). Ghee should be given in a cup of black metal and the drinks in a silver cup (then follow more particulars in a similar vein, mainly meant evidently for a royal person) ... Having thus understood the details of arrangements of the foods, the intelligent one should serve the eater in a secluded, charming, good, clean and even place decorated with fragrant flowers and where there is no likelihood of dust and the like, falling down. Su. su. 467, 448.458.

61. विशिष्टमिष्ट संस्कारैः पथ्यैरिष्टै रसादिभिः ।
मनोज्ञं शुचिं नात्युष्णं प्रत्यग्रमशनं हितम् ।।

The food prepared specially by means of the desirable culinary measures as well as salutary and desirable tastes and the like, pleasant to the mind, clean, not very hot and just fresh, is wholesome. Ss. su. 46.459.

62. अत्यम्बु पानात् विषमाशनाद्व
संधारणात् स्वप्न विपर्ययाच्च ।।
कालेऽपि सात्म्यं लघु चापि शुक्तं
अन्नं न पाकं भजते नरस्य ।।

The food consumed by a person will not get digested because of drinking too much of water (along with it) or if the food is imbalanced or because of repressing

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(the irrepressible natural urges of emesis, micturition, etc.) or changes in sleep habits or if the food taken is too little even if it is in time and homologous (viz. compatible). Ss. su. 46. 500

इर्ष्या भय क्रोध परिक्षतेन
लुब्धेन शुग्दैन्य निपीडितेन।।
प्रद्वेष युक्तेन च सेव्यमानं
अन्नं न सम्यक् परिणाममेति।।

The food taken by a person (when he is) hurt by envy, fear and anger, or who is greedy or tormented by grief, and misery or who is seized with intense jealousy will not get digested properly. Ss. su. 46. 50.

63. विसृष्टे विण्मूत्रे विशदकरणे देहे च सुलघौ। विशुद्धे चोग्दारे हृदि सुविमले वाते च सरति।।
तथा अन्न श्रद्धायां क्लमपरिगते कुक्षौ च शिथिले। प्रदेयस्तु आहारो भवति भिषजां कालः स तु मतः।

(*When a dieting is to be given*) When micturition and defaecations are over, the body is clear and light, the belch is clean, mind is well disposed, movement of *vata* is proper, and the liking for food has commenced and the fatigue (if any) has gone, the belly has becom - loose - this becomes the time when the physician should give the food. Ss. su. 64. 84.

अत ऊर्ध्वं द्वादशाशन प्रविचारान् वक्ष्यामः तत्र शीतोष्णस्निग्ध रुक्षद्रव शुष्क एक कालिक द्विकालिकौपध युक्तमात्राहीन दोष प्रशमन वृत्यर्थाः।

Henceforth we shall comment upon twelve distinctive categories of eating. These are as it concerns with (*which type of persons* the following types of food are to be prescribed :) the cold, the hot, the unctuous, the rough, the fluidy and the dry (foods); (and, the foods that is) of one time (a day) or two time (a day) or (food that) is accompanied with medicine or which is less than the required quantum, or, which is alleviative of a vitiation, or as it concerns the profession (of the person). Ss. u. 64. 56.

64. अथ अशितेन पीतेने खादितेन युक्तितः। बलमाप्यायते जन्तोः सद्यो वह्निरिवेन्धनैः।।
तेनैव अत्यादृतेनेह भोजनेन शरीरजाः। व्याधयस्संप्रवर्धन्ते कायाग्नावपि दूषिते।।

The strength of the organisms thrives by what is eaten, drunk or gulped properly very much like the fire thriving immediately by fuel. And, it is by consuming these themselves in excess quantity flourish well the diseases of the body when the digestive fire of the body is vitiated. Bhela. su. 5 1,2.

65. द्विविधंतु भिषग्विद्यादाहारस्यैव लाघवम्। द्विविधं गौरवं भुक्ते प्रोच्यमानं निबोधत।।
मात्रालघुस्यादाहारः कश्चिद्द्रव्य लघुः स्मृतः। मात्रागुरुस्तथैव स्याद् द्रव्यतश्च तथा गुरुः।।

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The physician should know that the lightness of the food in take is two fold; (similarly), the heaviness is (also) two fold. Listen to it, as I speak of them. Food may be light because of the smallness of the intake while some foods are light by the quality of the material. Similarly, other food materials are heavy because of the quantity of the intake while others are heavy by the quality of the material. Bhela. su. 5. 3,4

66. स्वस्थस्य अन्नेन वर्धन्ते धातवः शोणितादयः। व्याधितस्यापि दोपाय भोज्यं परिणमत्यथ।।
यथा हि अकाल वृष्या च भूमौ बीजं विपद्यते। वर्धति काल वृष्ट्या च देहिनोऽपि तथा रसैः।।

The body constituents commencing from blood onwards grow by food in a healthy person. (But,) in a diseased person the (same) food results in (increasing) the morbidity (lit. vitiation). Just as a seed in the soil gets into calamity by untimely rains, but thrives by rains in time so is (the situation in) the body. Bhela. su. 5.15,16.

67. तत्र सप्त आहार कल्पना स्वभाव संयोग संस्कार मात्रा देश कालोपयोग व्यवस्था भेदेव स्वास्थ्यास्वास्थ्य फलानां हेतु भूताः।

The preparations of food are of seven kinds by the respective differences such as : what is eaten as such (lit. in its natural form), or in combination (with something else) or after (the requisite) culinary treatment, or by the diversities in the measure (with which it is taken), the place, the time, the (specific) utility (for which it is taken). (It is by these differences), they (viz., these seven preparations) become responsible for the result of health or ill-health. As. su. 10.4

68. तथा अन्न श्रद्धायां क्लम परिगमे कुक्षो च शिथिले।
प्रदेयस्तु आहारो भवति भिषजां कालः स तु मतः।

The food is to be given specially for a convalescent when evacuation is over; the faeces and the urine removed; the belch is free from sweetness, acidity, vapour or smell; the wind is flowing down below the cardiac region with no turbidity; the desire for food is free from tiredness or fatigue; and, the stomach is free from stiffness since the desire for food has commenced. Su. u. 64. 84.

69. आहारस्य सम्यग् युक्तं प्रमाणं पुनरग्निबलापेक्षि दुर्बलाग्नि विवृद्धये एक कालं तथा हीनमात्र एव आहारो दातव्यः।

The proper measure of food employed depends upon the digestive strength of the person concerned. To augment a weak digestive strength the food should be given at a single time and in a little quantity only. Su. u. 2.64, 65

70. यावान् आहार एक कालं भुज्यते पुरुषेण स आहार राशिः।
तस्य प्रमाणं तु जठरस्य द्वौ भागावन्नेन प्रपूरयेत् जलादिना पानेनैकमंशं प्रपूरयेच्चतुर्थं तु पवनादीमाश्रयमव शेपयेत्।

That amount of food which a person consumes at a time is called the quantum of the food (for that person). As. su. 10.9. Its measure is (as follows :) two parts of

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the stomach should be filled with the food, one part is to be left free for (the play of) the wind and the like. Ah. su. 8.46.

71. स खलु विधिवत् अभ्यवहृतमन्नजातं प्राणेन वायुना कोष्ठमाकृष्टं द्रवैः विभिन्न संघातं स्नेहेन मृदुकृतं आमाशयस्थं समानेन अभिसंधुक्षितोऽन्तराग्निः पचति यथा बाह्याग्निः स्थालीस्थ तोयतण्डुलं पचति।

The course and the fate of food: The inner (digestive) fire cooks the totality of the food consumed according to the prescribed rules, attracted to the viscera by the *prāṇavāyu* broken out of its compactness by liquid, softened by the unctuous substances situated in the stomach and kindled by the *samāna vāyu,* just like the fire outside cooks the water and rice kept in a vessel. As sa. 6.57.

72. आहार परिणामकराः भावाः - पुनरुष्मा वायुः क्लेदः स्नेहः कालः समयोगश्च इति। तत्रोष्मा पाचयति वायुः अपकर्षति क्लेदः शैथिल्यमापादयति स्नेहो मार्दवं जनयति कालः सर्ववपुर्व्याप्तिमभिनिर्वर्तयति। समयोगस्तु एषां परिणाम धातु साम्यकरः संपद्यते।

The phenomena involved in deciding the fate of the food : These are : heat, wind, wetness, oleates, time and collaboration (lit. equable employment). Therein, the heat cooks, wetness brings about the looseness, oleates produce softness, time manages to spread (the food) all over the body and collaboration accomplishes equalisation of all these with the body elements. As. su. 10. 61

73. आहार रसो व्यानविक्षिप्तो यथास्वं सप्तसु धात्वग्निषु क्रमात् पच्यमानः स्वात्म भाव प्रच्युति समनन्तरमेव प्राप्त रक्तादि धातु संज्ञकः कालवत् अस्खलित बल प्रमाणो देहमूर्जयित्वा धातून् धातुमलांश्च पुष्णाति।

The nutrient fluid scattered by the *vyāna* wind (viz., the lateral neuromuscular activity ?) getting cooked gradually in the (assimilatory) fire of the respective body elements, getting the designation of the (several) body elements of blood and the like immediately contiguous to the deprivation of their own (respective) natures, (and arising) uninterrupted like time in strength as well as measure, and invigorating the body, fosters the body elements as well as the impurities (thereof). AS. sa. 6.64 (*tissue level assimilation*)

74. बुभुक्षितेन पुरुषेण वातपित्त प्रशमनाय प्रथमं मधुरो रसः स पक्काशयगतं वायुं जयति। अम्ललवणौ मध्य भोजनस्थौ पित्ताशयेऽग्निदीप्तिं कुरुतः अन्ते कफ जयाय कट्वादयः। मतांतरं तु आदौ फलानि भुंजीत दाडिमादीनि ततः पेयान् ततो भोज्यान् भक्ष्यांश्च अत्रापि घनं पूर्वं समश्नीयादिति केचिदाहुः।

The sweet taste should be taken first by a hungry person in order to alleviate *vāta* and *pitta*. That will win over the *vāyu* in the region of the digested food (i.e. intestine). The acid and the salt taste taken in the middle of the meals stimulate the (digestive) fire in the *pittāśaya* and (one should take) the bitter taste and the like to win over the *kapha*. Another opinion here (is :) one should first eat fruits like pomegranate and the like, then the drinks and then the edibles and the gulpables and even there, some say that solids should be consumed earlier. Su. Su. 46. 460.

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12. Disease

a. *the very first birth in the history of mankind, primogenesis.*

1. प्रागपि चाधर्मादृते नाशुभोत्पत्तिरन्यतोऽभूत्। आदिकाले ह्यदिति सुत समौजसोऽति विमल विपुल प्रभावाः प्रत्यक्षदेवदेवर्षिधर्म यज्ञ विधविधानाः शैल सारसंहत स्थिर शरीराः प्रसन्नवर्णेन्द्रियाः पवन सम बल जव पराक्रमाश्चारु स्फिचोऽभिरुप प्रमाणाकृति प्रसादोपचयवन्तः सत्यार्जवानृशंस्य दानदम नियम तप उपवास ब्रह्मचर्य व्रतपरा व्यपगत भय राग द्वेष मोह लोभ क्रोध शोक मान रोग निद्रा तन्द्रा श्रम क्लमालस्य परिग्रहाश्च पुरुषा बभूवु रमितायुषः। तेषामुदारसत्व गुण कर्मणाम चिन्त्य रस वीर्य विपाक प्रभाव गुण समुदितानि प्रादुर्बभूवुः सस्यानि सर्वगण समुदितत्वात् पृथिव्यादीनां कृतयुगस्यादौ।

(*ethical facet* :) In the ancient times however, nothing inauspicious (like a disease) would ever occur without an *adharma* (committed somewhere). In the primal age, men were endowed with vitality equal to that of the sons of Aditi (i.e. the gods), exceedingly blameless and unhampered in powers; had a direct acquaintance with gods , the sages of the gods, the divine law, the sacrifices, the injunctions and the ritual procedures thereof; (in *physique* :) possessed with bodies well knit, firm and rocklike in their essence; graceful in colours and complexions as well as sensibilities; with strength, speed and prowess of the winds; with beautiful buttocks; with stature, lineaments, carriage and build in good accord with their forms; (*mentally:*) devoted and intent on truth, uprightness, compassion, charity, self-restraint, moral, discipline, penance, fasting, continence and religious vows; free from fear, passion, hate, infatuation, greed, anger, grief, arrogance, (excessive) sleep, indolence, fatigue, langour, sloth, and the spirit of acquisition; and, finally, of an unlimited span of life. It is for these people of generous minds, qualities and actions, that the crops of unthinkably wonderful taste, potency , post-assimilatory effect, specific and special action and virtues came into appearance since the (very) earth and the like were endowed flourshingly with all the good qualities in this beginning of the Krta Age.

भ्रश्यति तु कृत युगे केषांचिदत्यादानात् सांपन्निकानां सत्त्वानां शरीर
गौरवमासीत्। शरीर गौरवात् श्रमः श्रमादालस्यम् आलस्यात् संचयः संचयात् परिग्रहः परिग्रहात् लोभः प्रादुरासीत् कृते।

As the age of Kṛta wore on, some of those that were better circumstanced became of heavy body by over indulgence ; from the heavines of the body, fatigue arose; from fatigue, laziness; from laziness, the accumulation (of possessions) ; from accumulation, acquisitiveness and egoism; from acquisitiveness, greed – these all came into appearance in the Kṛta Age.

ततस्त्रेतायां लोभादभिद्रोहः अभिद्रोहादनृतवचनम् अनृतवचनात् काम क्रोध मान द्वेष पारुष्याभिघात भय ताप शोक चिन्तोद्वेगादयः प्रवृत्ताः। ततस्त्रेतायां धर्मपादोऽन्तर्धानमगमत्। तस्यान्तर्धानाद् युग वर्ष प्रमाणस्य पाद हासः पृथिव्यादेश्च गुण पाद प्रणाशोऽभूत्। तत्प्रणाश कृतश्च शस्यानां स्नेह-वैमल्य रस वीर्य विपाक प्रभाव गुण पाद भ्रंशः। तत स्तानि प्रजा शरीराणि हीयमान गुण पादैराहारविहारैरयथापूर्वमुपष्ट भ्यमानानि अग्नि मारुत परीतानि प्राग्व्याधिभिर्ज्वरादिभिराक्रान्तानि। अतः प्राणिनो ह्रासमवापुरायुषः क्रमश इति।

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Then in the Age of Treta, malice arose from greed; untruthful words from malice, and from untruthful words commenced lust, anger, arrogance, hatred, harshness, aggression, fear, affliction, grief, anxiety, excitement and the like. Then in the Treta, one quarter of Dharma vanished. With a quarter thus vanishing in accord with the Age, a quarter of the qualities of earth and the like also got destroyed. It is from this destruction, there was a deviance by a quarter in the unctuousness, purity, taste, potency, post-assimilatory effect, specific and special effect and quality (of the drug materials). Then onwards, the bodies of the people, nourished by food and sports and the gastric fire and the winds as before but all diminishing by a quarter in quality, got afflicted first by fever and the like. Therefore the span of life of human beings got reduced gradually. Cs. vi. 3.24

b. *definition, diagnosis and classification*

2. तद् दुःख संयोगा व्याधय उच्यन्ते।
ते चतुर्विधाः - आगन्तवः शारीराः मानसाः स्वाभाविकाश्चेति।

(*What is a disease* ?:) Anything that brings a sadness and grief to this human person (or the *puruṣa*) (which is our sole concern as we already stated) is a disease. They are of four kinds - *āgantavaha* (the accidental), *śārīrāha* (the body born), *mānasāha* (the mind born), and *swābhāvika* (the natural). Ss. su. 1. 23, 24

(In such near modernistic and quite practicable classification of the diseases that we have in Susruta, viz., into four kinds, as here, based on its origin, or later, into three kinds based on the prognosis, as *sādhya*, the curable, *yāpya* the mitigatable, and *asādhya* the incurable or two kinds based on the means of the treatment as surgical and medical, what we miss totally is : a microbial disease, i.e. a disease caused by an invading and extraneous micro-organism. In terms of pure therapy however, it can still be argued purely in defence of the ayurvedists that this may not be a great and highly vital lacuna, for, whatever may be the causative factor : physiological or microbial, the reaction of the body that we call as the disease will not transgress either the three vitiations, *tridoṣas* or the seven constituents, *sapta dhātus*).

व्याधि शब्दोऽयम् दुष्टेषु वातादिषु तत्कार्येषु ज्वरादिषु क्लेशेषु रागादिषु दुःखेषु संसारानुवृत्ति जनकेषु च वर्तते।

This term 'disease' refers to the vitiated *vāta* and the like, the distresses of the fever and the like that are the actions of these vitiated *doṣas* as well as the griefs due to the passion and the like that abide in the following of the worldly life. Da. su. su. 1.14

3. तेषा मागन्तवो अभिघात निमित्ताः।
शारीरास्तु अन्नपानमूला वातपित्त कफ शोणित सन्निपात वैषम्य निमित्ताः।
मानसास्तु क्रोध शोक भय हर्ष विषाद इर्ष्या अभ्यसूया दैन्य मात्सर्यकामलोभप्रभृतय इच्छाद्वेष भेदैः भवन्ति।
स्वाभाविकास्तु क्षुत् पिपासा जरा मृत्यु निद्रा प्रभृतयः।
त एते मनः शरीराधिष्ठानाः।
तेषां
संशोधन संशमन आहार आचाराः सम्यक् प्रयुक्ता निग्रह हेतवः।

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The accidental (diseases) arise because of injury and damage. The bodily diseases have their source in what one eats and drinks; they arise by the incompatibilities of *vāta, pitta, kapha* and blood individually or in collaboration with one another. The mental diseases arise by the vagaries of anger, grief, fear, elation and mirth, gloominess, jealousy, indignation, depression, malice, lust, greed and the like, as well as desire and hatred. The natural diseases are : hunger, thirst, old age, death, sleep and the like.

All of these diseases however have their basis both in the mind as well as the body. Measures of eradication, palliation, nutrition and general behaviour and conduct, if well employed, become the means to control these diseases. Ss. su. . 25, 26, 27.

(The relevancy and justifiably broad sweep even now of these statements as well as what follows just below are self evident).

c. (*diagnosis* :)

4. प्राणिनां पुनर्मूलमाहारो बल वर्णौजसां च।

The final basis of the strength, the colour and the vitality or the *ojas* of all the animals is the food that they take. Ss. su. 1. 28.

(We have translated *ojas* as just vitality, though this term is often presumed specially by modern writers on Ayurveda to signify so many ill defined constituents, that it has led many to doubt its very existence even. By quite an involved logic Bhisagratna equates *ojas* to albumen. A simpler and straight forward understanding of this term is to presume that its denotes *that* bodily vigour that can be definitely seen in any healthy person or even an animal; that is why probably the term in the Text is *sarvabhūtānām*, i.e., all created beings, who enjoy and display all the habitual and wanton vigour or *joie de vivre*, (Refer MW. *Ojas : vaj* or *uj* : cf. *ugra*; the principle of vital warmth and action; splendour) as French would put it. Even a well grown, blooming flower has an *ojas*.

What is easily apparent in any living person is just these three : strength, colour, and vitality or splendour - *bala, varṇa* and *ojas*. The food he takes is the final source of all of these. A clear recognition and the consequent *clinical* evaluation of these three simple and obvious features is thus a tribute to the keen observing power of the ancients. Even now, a simple and effective measure of diagnosing a disease is any abnormal variation in the habitual strength, colour and vitality of a person or any of his organs or the parts of his body).

d. (*treatment and drugs* :)

5. स षट्सु रसेषु आयत्तः रसाः पुनर्द्रव्याश्रयाः द्रव्याणि पुनरोषधयः।
तास्तु द्विविधाः स्थावरा जङ्गमाश्च।

This food is distributed in the six *rasas* and these rasas in turn are based on the materials that are taken in as food while (it should be noted, that) these (latter) materials themelves (viz., the foods) are (also) the drug substances. (These drugs) in turn are of two kinds : plant and animal. Ss. su. 1. 28

(If food is the basis of all the available criteria on which the physician interprets health as well as ailment, how we come in contact with this food to start with, becomes important. The first conscious interpretation of the food is taste; our

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tongue comes into contact with it first, and there is no food that does not have some taste or the other. How do we classify this taste and into how many categories? The basis has perforce to have an amount of subjectivism. Except for sight and sound and even there only partially, no better and much less, purely objective criteria exist, even in modern physiology. It is also difficult to make positive statements about the sense of an animal, say how it finds the particular taste of food. We cannot but reiterate our own classification of the *rasas* as being valid there also. This is infact how ancient veterinary physicians of India e.g. Palakapya proceeded.

In spite of accepting the logic behind such extrapolations, a modern reader is still apt to find the importance given by the ayurvedic physicians for taste as too fussy. But one should not ignore the severe practicality underlying the postulations here. Whatever we eat as food normally, *has* to have a taste, for, that is how our body reacts to it first. It is therefore extremely logical to enquire if we find any variations in these reactions and erect all our postulations henceforth with *this* as our base line of reference. Such reactions were called as taste or *rasa* (*ras* – to taste, relish) and the ayurvedists proceeded to make its discernible variations as *the* discernible and 'objective' criteria for further discussion, dietetic and pharmacological).

6. द्विविधास्तु व्याधयः – शस्त्र साध्याः स्नेहादि क्रिया साध्याश्च।
तत्र शस्त्र साध्येषु स्नेहादि क्रिया न प्रतिषिद्यते स्नेहादिक्रियासाध्येषु शस्त्र कर्म न क्रियते।

e. (*various classifications of the diseases* :) There are two kinds of diseases (as per the mode of their treatment): those that are amenable to a surgical operation and those that are medical, viz., to be treated by such procedures as application of ointments and the like. Medical action is not contra-indicated (*pratiṣidhyate*) in surgical cases but a surgical intervention is not resorted to (at all) if the cure can be achieved purely medically. Ss. su. 24.3

7. अस्मिन् पुनः शास्त्रे सर्वतन्त्र सामान्यात् सर्वेषां व्याधीनां यथास्थूलं अवरोधः क्रियते।
प्रागभिहितं तद्दुःखसंयोगा व्याधय (सू.अ. १) इति।

Now, since surgical intervention is similar in all(the eight) branches of medicine, we shall give here in this Technical Work (*śastra* , of surgery) a comprehensive account of (whatever, *sarveṣam*) diseases (that are there). It has been stated earlier (by us in Ss. su. 1) that anything that brings about grief is a disease . Ss. su. 24. 4

(It is difficult to think of a definition for a disease wider in scope than this. It is therefore very proper to start from the very first cause, viz., the occurrence of this grief and attempt its classification, etc. This is what is done now).

8. तच्च दुःखं त्रिविधम्– आध्यात्मिकम् आधि भौतिकम् आधिदैविकम् इति।
तत्तु सप्तविधे व्याधौ उपनिपतति।
ते पुनः सप्त विधा व्याधयः; तद्यथा –
आदि बल प्रवृत्ताः जन्म बल प्रवृत्ताः दोषबल प्रवृत्ताः संघातबल प्रवृत्ताः
काल बल प्रवृत्ताः दैव बल प्रवृत्ताः स्वभाव बल प्रवृत्ता इति।

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This grief is of three kinds : i) due to the individual person concerned or the *puruṣa* himself (*adhyatmikam, viz., his* own physical and mental activities), ii) due to (external) physical causes (*ādhibhautikam*) or iii) due to an act of god (*ādhi daivikam* over which neither the indiviidual nor a physical cause has any role). These pounce (*upanipatati*) upon (man) in the form of seven kinds of diseases. These seven kinds are : i) what has mainly started by the power of the initial cause (inherited), ii) birth (congenital), iii) vitiation of the dosas (physiological), iv) injurious impact (accidental), v) time (climatic), vi) fate (an act of god) and vii) nature (natural). Ss. su. 25. 4

9. तत्र आदि बल प्रवृत्ता ये शुक्र शोणित दोषान्वयाः कुष्ठार्शप्रभृतयः, तेऽपि द्विविधाः - मातृजाः पितृजाश्च।
जन्म बल प्रवृत्ता ये मातुरपचारात् पंगु जात्यन्ध बधिर मूक मिन्मन वामन प्रभृतयो जायन्तेः
तेऽपि द्विविधाः - रस कृताः दौहृदापचारकृताश्च।
दोषबल प्रवृत्ता ये आतङ्क समुत्पन्ना मिथ्याहाराचार कृताश्च,
तेऽपि द्विविधाः -
आमाशय समुत्थाः पक्काशय समुत्थाः श्च।
पुनश्च द्विविधाः शारीरा मानसा श्च। त एते आध्यात्मिकाः।

The *inherited* diseases are those that ensue (*anvayāh*) due to the defects of the combining *śukra* and the *śoṇita* (sperm and the egg as we would now say); for instance, leprosy, piles, and so on. These in turn are of two kinds : maternal or paternal. The *congenitals* are those due to the misconducts of the mother (at pregnacy, parturition, etc.). Examples are : lameness, congenital blindness, deafness, dumbness, indistinct and nasal speech, drawfism and so on. These are also of two kinds : due to the *rasa* (i.e., nutritional indulgences) or the morbid desire of the mother at pregnancy (*dauhṛda*). The *vitiational* diseases are those that arise due to a disquietitude (in the body or the mind, *atanka*) caused by improper food and conduct. These also are to two kinds : originating in the *amasaya* (region where the food is still in the raw condition, i.e., not fully digested, viz., stomach) or *pakkasaya* (region where the food is fully digested, viz., small intestine). These can also be categorised into two : the physiological and the mental. All of these are the diseases of the individual self (*ādhyātmika*, i.e. caused due to what the *puruṣa* himself does). Ss. su. 25. 5

10. संघात बल प्रवृत्ता य आगन्तवो दुर्बलस्य बलवद्ग्रिहात्,
तेऽपि द्विविधाः - शस्त्र कृता व्यालकृताश्च
एते आधि भौतिकाः।

The *accidental* diseases are due to unforeseen happenings or the compulsion of the weak by the powerful. These are also of two kinds : those due to the impact of some weapons and those that are due to the predatory animals. These diseases are physical (*ādhibhautika*). Ss. su. 25. 6.

11. कालबल प्रवृत्ता ये शीतोष्णवातवर्षातपप्रभृतिनिमित्ताः;
तेऽपि द्विविधाः - व्यापन्नर्तु कृताः अव्यापन्नर्तुकृताश्च।
दैवबल प्रवृत्ता ये देव द्रोहादभिशप्तका अथर्वणकृता उपसर्गजाश्चः
तेऽपि द्विविधाः - विद्युदशनिकृताः पिशाचादिकृताश्चः
पुनश्च द्विविधाः - संसर्गजा आकस्मिकाश्च।

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स्वभाव बल प्रवृत्ता ये क्षुत् पिपासाजरा मृत्यु निद्राप्रभृतयः,
तेऽपि द्विविधाः - कालजा अकालजाश्चः
तत्र परिरक्षण कृताः कालजाः अपरिरक्षण कृता अकालजाः।
एते आधिदैविकाः।
अत्र सर्व व्याध्यवरोधः।

The diseases due to the *times* are those caused by cold, heat, storm, rains and the like. These are also of two kinds : due to disturbed seasons or the normal, namely, the routine seasonal variations (i.e., climatic). Those caused by the (*act of*) *gods* (i.e. over which the individual person has no control or say) are the ones due to curse, witchcraft and accidental contact (*upasarga*). These again are of two kinds : by a fall of lightning or hailstorm, or the devils and the like. The *contact* born are of two kinds : contagious (*samsargaja*) and accidental (*akasmika*). The *natural* diseases are hunger, thirst, old age, death, sleep and the like. These are also (of) two (categories) : the timely and the untimely. Those that affect wholly because of the time *even if* one has taken steps toward them off are the timely diseases. Those that affect because we have *not* taken steps toward them off are the untimely diseases. All of these are due to fate or an act of god. (i.e., we have no control over thier incidence).

This is a comprehensive account of all the possible diseases that can affect man. Ss. su. 25. 7

f. *a general aetiology* :

12. सर्वेषां च व्याधीनां वातपित्त श्लेष्माण एवं मूलः तल्लिङ्.ग त्वात् दृष्ट फलत्वात् आगमाच्च।
यथा हि कृत्स्नं विकार जातं विश्वरुपेण अवस्थितं सत्व रजस्तमाँसि न व्यतिरिच्यन्ते एवमेव कृत्स्नं विश्वरूपेण अवस्थितं अव्यतिरिच्य वात पित्त श्लेष्माणो वर्तन्ते।
दोष धातु मल संसर्गादायतन विशेषान्निमित्ततश्च एषां विकल्पः।
दोष दूषितेषु अत्यर्थं धातुषु संज्ञा -
रसजोऽयं शोणितजोऽयं मांसजोऽयं
मेदोजोऽयं अस्थिजोऽयं मज्जजोऽयं
शुक्रजोऽयम् व्याधिरिति।।

For all of these diseases however, *vāta, pitta* and *śleṣma* themselves are the root causes. (We can hold) this to be so because (i) it is *their* characteristics (as described before) that we actually see as symptoms, (ii) we get curative results when we follow a symptomatic treatment on their basis and (iii) all the concerned technical texts (*a clear reference ot the existence of other texts of authority then*) teach us so. Just as the whole gamut of variations (*kṛtsnam vikārajātam*) that exist in the form of this entire cosmos will not transgress the three isolates of *satwa, rajas* and *tama*, in the same manner, the whole gamut of the abnormalities in the cosmos of man exists, *not* transgressing the three isolates of *vāta, pitta* and *śleṣma*. The (many) diversities and the alternatives (*vikalpa*) that occur here are due to (i) the specific contacts with the individual *doṣa, dhātu* or *mala* (*viz., which of these three are affected*) *or (ii)* the specialities of the receptacle (or the body tissue) where lodged (*viz., depending upon the specialities of the place where this affecting has occurred*) *or (iii)* the specific cause (*nimitta, viz., depending on the particular cause that has brought about the affecting*). The (predominant) symptoms get formed by that (particular) constituent that is most vitiated. We then

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say that such and such a disease is born from the *rasa*, blood, flesh, fat, bone, marrow or the *śukra* (i.e., anyone or more of the seven *dhatus* as the case may be). Ss. su. 25. 8

g. *clinical manifestations of the vitiation of the dhatus*:

(How scientific, effective, correct and relevant even now are the observations of Susruta are probably best illustrated in the account below).

13. तत्र अन्ना श्रद्धारोचका विपाकाड्.गमर्द ज्वरहृल्लास तृप्ति गौरव हृत्पाण्डुरोग मार्गोपरोध कार्श्य वैरस्यागाड्.गसादाकालज वलीपलित दर्शन प्रभृतयो रस दोषजा विकाराः।

कुष्ठ विसर्प पिडकामशक नीलिका तिलकालकन्यच्छ व्यंगेन्द्रलुप्त प्लीह विद्रधि गुल्म वात शोणित अर्शोऽर्बुद अंगमर्द असृग्दर रक्तपित्त प्रभृतयो रक्त दोषजाः। गुद मुख मेढ्र पाकाश्च।

अधिमांस अर्बुद अर्श अधिजिह्व उपकुश गलशुण्डिका अलजी मांससंघात ओष्ठ प्रकोप गलगण्ड गण्डमाला प्रभृतयो मांसदोषजाः।

ग्रन्थिवृद्धि गलगण्ड अर्बुद मेदोजौष्ठ प्रकोप मधुमेह अतिस्थौल्यातिस्वेद प्रभृतयो मेदोदोषजाः।

अध्यस्थि अधिदन्त अस्थितोद शूल कुनख प्रभृतयो अस्थिदोषजाः।

तमोदर्शन मूर्च्छा भ्रम पर्वस्थूलमूलारुर्जन्मनेत्राभिष्यन्द प्रभृतयो मज्ज दोषजाः।

क्लैब्य अप्रहर्ष शुक्राश्मरी शुक्रमेह शुक्रदोषादयश्च तद्दोषाः। त्वग् दोषाः, संगोऽति प्रवृत्तिरयथा प्रवृत्ति र्वा मलायतन दोषाः।

इन्द्रियाणामप्रवृत्तिरयथा प्रवृत्तिर्वा इन्द्रियायतन दोषाः।

इत्येष समास उक्तः।

विस्तरं निमित्तानि चैषां प्रतिरोगां वक्ष्यामः।

The abnormalities that arise from vitiation of the *rasa* are: disinterest in food, (anorexia), non-assimilation (of food), bodily pain, fever, a jumping of the heart (*hṛllasa*) or nausea, a feeling of satiation even if one does not eat, a heaviness, heart diseases, jaundice, obstruction in the *srotas* (the transport channels), (general) leanness (of the body), disinterest (to do anything), a fatigue in the body, untimely wrinkles of the body, untimely grey hairs and the like. The diseases that arise due to the vitiation of the *blood* are *kuṣṭa* (skin diseases), erysipelas (*visarpa*), pustules (on the face - *piḍaka*), *maśaka* (a skin disease causing dark bean like pustules or eruptions), *nīlika* (the black and blue marks on the face), *tilakālaka* (sesame like dark spots on the skin), *nyaccha* (*vata* moles on the body), *vyanga* (speckles on the skin), morbid baldness (*indra lupta*), disease (enlargement ?) of spleen (pliha), abscess (*vidradhi*), chronic glandular enlargement in the spleen or the abdominal region (*gulma*), morbid swellings due to *vāta* (*vataśopha*), inflammation of blood (*śoṇita*), haemorrhoids, pounding pain all over the body (*angamarda*), menorrhagia (*asṛgdara*), plethora (*rakta pitta*) and the like, as well as the inflammation in the rectum, the mouth and the penis. The vitiations of the *flesh* causes the diseases of proud flesh or cancer (especially in the eyes or the back part of the gums - *adhimāmsa*), tumour (*arbuda*), haemorrhoids, a peculiar swelling of the tongue or epiglottis (*adhijihva*), an abscess on the underside of the tongue (*upajihwa*), gum-boil (*upakuśa*), swelling of the uvula (galaśuṇḍika), inflammation of the eye at the edge of the cornea (*alajī*), a heaping of the flesh (*māmsa sanghāta*), a swelling or inflammation of the lips (*oṣṭa prakopa*), goitre (*galaganḍa*), inflammation of the glands of the neck (*ganḍamāla*) and the like. Glandular swellings (*granthi*), outgrowths or overgrowths (*vṛddhi*), goitre, adipose swelling of the lips (*medoja oṣṭa prakopa*), diabetes mellitus (*madhu meha*),

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excessive stoutness, excessive sweating and the like arise because of vitiation of the *fat*. Osteoma *(adhyasthi)*, odantoma (*adhidanta*), pricking and acute pain in the bone (whittlow ? *kunakha*) and the like are due to the vitiation of the *bone*. Seeing darkness (*tamodarśana*), swooning *(murcha)* , confusion (*bhrama*), occurrence of swelling and pain at the joints (specially the knuckles ?), running at the eyes *(netrabhisyanda)* arise due to the vitiation of the *marrow*. Impotency (*klybya*), no excitement of libido *(apraharsa)*, seminal calculus (*sukrasmari*), seminal vitiation (*sukra* dosa) and the like arise because of vitiation of the *sukra*. The skin troubles, sticking together of the urine and stools, too much or improper evacuation of them are born of the vitiation of the *mala*. Inaction or improper and defective functioning of the senses arise when the *dosas* make these *(indriyas concerned)* as their (specific) abode (*ayatana*).

This in brief is the account of the possible diseases. Further details as well as the causes thereof will be dealt with in connection with individual diseases. Ss. su. 25.9

14. कुपितानां हि दोषाणां शरीरे परिधावताम्।
यत्र संगः खवैगुण्यात् व्याधिस्तत्र उपजायते।।

Wherever the aggravated *dosa* which is already wandering about here and there (*paridhāvatām*) because of its own abnormal quality, comes into intimate contact (with any specific precipitating factor), the disease gets originated (as it were) there. Ss. su. 25.10.

भूयोऽत्र जिज्ञास्यं किं वातादीनां ज्वरादीनां च नित्यः संश्लेषः परिच्छेदो वा। इति।
यदि नित्यः संश्लेषः स्यात् तर्हि नित्यातुराः सर्व एव प्राणिनः स्युः
अथापि अन्यथा वातादीनां ज्वरादीनां च अन्यत्र वर्तमानानामन्यत्र लिंगं न भवति इति कृत्वा यदुच्यते वातादयो ज्वरादीनां मूलानीति तत्र।
अत्र उच्यते -
दोषान् प्रत्याख्याय ज्वरादयो न भवन्तिः अथ च न (नित्यः) संबन्धः, यथाहि विद्युत् वाताशनि वर्षाणि आकाशं प्रत्याख्याय न भवन्ति सत्यपि आकाशे कदाचिन्न भवन्ति अथ च निमित्ततः तत एव उत्पत्तिरितिः तरंगबुद्बुदादयश्च उदक विशेषा एवः वातादीनां ज्वरादीनां च नाप्येव संश्लेषो न परिच्छेदः शाश्वतिकः, अथ च निमित्तत एवं उत्पत्तिरिति।

Here we can pose a question. Is it that the *dosas* like *vāta* etc. have an invariable association or dissociation with the diseases like fever (*jwara*), etc. If the association is invariable, all beings will always become a patient. If this is not so and if we state that *vata* and the like and fever and the like stay in one place and do not produce their symptoms somewhere else, we cannot say that the *vāta* etc., are the causes of fever etc. This is not correct (either). It should be noted (therefore) here (that): fever, etc. do not arise without the accompaniment of the *dosas* and simultaneously there is no constant connection between them also. (*To give an illustration, take an analogy.*) For instance, lightning, hail-storm, and rains do not occur in the absence of a sky, but though a sky is present always, these lightning, etc., do not occur there always (either) ! They come into being only if some specific cause is found to be there. Similarly waves and bubbles are parts of the water alright; but they arise only occasionally. In this way, there is no constant

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association or dissociation of the *vāta* , etc., to the fever, etc. Their origin is therefore as per specific causes (which vary from case to case). Ss. su. 25.11.

विकार परिमाणं च संख्या चैषां पृथक् पृथक्।
विस्तरेण उत्तरे तन्त्रे सर्वाबाधाश्च वक्ष्यते।।

The magnitude of the abnormalities (of these diseases and the factors thereof) and each and everyone of all the possible afflictions will be told in detail in Uttaratantra by their number as well as the types. Ss. su. 25, 10-12.

h. *classification of diseases - nosology*

15. द्वे रोगानीके भवतः प्रभाव भेदेन - साध्यम् असाध्यं च, द्वे रोगानीके बल भेदेन मृदु दारुणं च, द्वे रोगानीके अधिष्ठान भेदेन-मनोऽधिष्ठानं शरीराधिष्ठानं चः द्वे रोगानीके निमित्त भेदेन स्वधातु वैषम्य निमित्तम् आगन्तुनिमित्तं चः द्वे रोगानीके आशय भेदेन आमाशय समुत्थं पक्काशय समुत्थं चेति।

There occur two categories of diseases on the score of their difference in might - curable and incurable; two categories of diseases, on account of their difference in strength - mild and severe; two categories of diseases, by their difference in seat - mind-based and body-based; two categories of diseases, by their difference in cause - due to the imbalance of the body's own elements (endogenous) and due to an extraneous agent (exogenous); two categories of diseases, by their difference in the receptacle - born in the stomach (gastrogenous) and born in the intestine (enterogenous).

एवमेतत् प्रभावबलाधिष्ठान निमित्ताशय भेदात् द्वैधं सद्भेद प्रकृत्यन्तरेण भिद्यमानम् सन्धीयमानम् स्यादेकत्वं बहुत्वं वा।

Though in this way, there is a binaryness on account of the difference in might, strength, seat, cause and receptacle, there will be a singleness or a plurality when they get further unified or divided in terms of some other considerations.

एकत्वं तावदेकमेव रोगानीकं, दुःखसामान्यात्; बहुत्वं तु दश रोगानीकानि प्रभाव भेदादिना भवन्तिः बहुत्वमपि संख्येयं स्यादसंख्येयं वा।

Such a unifiedness for the whole army of the diseases is one alone: the pain that is common to all of them. The plurality comes about as for instance in the ten categories of the diseases divided by their differences in their might and so on (as stated above); and, a plurality (more than this) is (of two kinds): countable or uncountable.

तत्र संख्येयं ताव द्व्यथोक्तमष्टोदरीये,
अपरि संख्येयं पुनर्यथा - महारोगाध्याये रुग्वर्ण समुत्थादीनामसंख्येयत्वात्।

The countables for instance are as (seen) in the eight abdominal affections - (*sūtrasthāna, chapter* 19). And, the uncountables are as (seen) in the chapter on the Great (classes of the) diseases (*sūtrasthāna, chapter* 20), because of the innumerable nature of their (differences in) pain, colour, upraisal and the like. Ca. vi. 6.3

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16. भेत्ता हि भेद्यमन्यथा भिनत्ति, अन्यथा पुरस्तात् भिन्नं भेद प्रकृत्यन्तरेण भिन्दन् भेद संख्याविशेषमापाद यत्यनेकधा न च पूर्वं भेदाग्रमुपहन्ति।

समानायामपि खलु भेद प्रकृतौ प्रकृतानुप्रयोगान्तरम् अपेक्ष्यम्।

(*some principles of taxonomy.*) A classifier may classify a subject admitting of classification in one particular way. Reclassifying his subject over and over again on other criteria, he is (himself) able to get a fresh classification every time, but will not invalidate the previous classification (by these subsequent reclassifications). Moreover, although the classifications may appear similar as regards number, yet in the light of the nature of the other criteria, they are infact, different.

सन्ति हि अर्थान्तराणि समान शब्दाभिहितानि सन्ति च अनर्थान्तराणि पर्याय शब्दाभिहितानि।

(In any system of classification of entities) there are different things that are denoted by the same term and conversely the same thing may (also) be denoted (sometimes) by different synonymous terms. Cs. vi. 6.4.

17. तत्र व्याधयोऽपरिसंख्येया भवन्तिः अति बहुत्वात्, दोषास्तु परिसंख्येया अनतिबहुत्वात्। तस्माद्यथाचित्रं विकारानुदाहरणार्थम् अनवशेषेण च दोषान् व्याख्यास्यामः।

Now the diseases are innumerable, there being a great many of them; but, the vitiations are clearly countable, as they are but few. Therefore we shall comment upon the vitiations (alone) in all completeness, leaving nothing behind and as pictured by the previous authorities (*a clear reference to prior literature by Caraka*) and to illustrate (some of) the diseases (only, as these latter cannot be so completely expounded upon):

रज स्तम श्च मानसौ दोषौ। तयोर्विकाराः काम क्रोध लोभ मोह ईर्ष्या मान मद शोक चित्तोद्वेग भय हर्षादयः। वातपित्त श्लेष्माणस्तु खलु शारीर दोषाः। तेषामपि च विकारा ज्वरातीसार शोफ शोष श्वास मेह कुष्ठादयः। इति दोषाः केवला व्याख्याता विकारैक देशश्च।

The two vitiations of the mind are: *passion* (rajas) and delusion (*tamas*). Their disorders are - lust, anger, greed, infatuation, envy, conceit, arrogance, grief, excitement, fear, exhilaration and the like. *Vāta, pitta* and *kapha* are (all) but the vitiations of the body and their disorders are fever, diarrohoea, edema, emaciation, dyspnea, urinary anomalies, dermatosis and the like. Thus we have listed (lit. commented upon) the vitiations in their entirety, but the diseases only in part. Cs. vi. 6.5

18. तत्र खलु एषां द्व्यानामपि दोषाणां त्रिविधं प्रकोपणं; तद्यथा - असात्मेन्द्रियार्थ संयोगः प्रज्ञापराधः परिणामश्चेति।

Now for both of these two vitiations (psychic and somatic), the exciting factors ard three; such as, the noncompatible conjunction between the sense objects and the senses, the wilful transgression and the effect of time Cs. vi. 6.6.

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19. प्रकुपितास्तु खलु ते प्रकोपणविशेषाद् दूष्य विशेषाच्च विकारविशेषानभिनिर्वर्तयन्ति अपरिसंख्येयान्।
ते च विकाराः परस्परमनुवर्तमानाः कदाचिदनुबध्नन्ति कामादयो ज्वरादयश्च।
नियतस्तु अनुबन्धो रजस्तमसोः परस्परं न हि अरजस्कं तमः प्रवर्तते।
प्रायः शारीर दोषाणामेकाधिष्ठानीयानां सन्निपातः संसर्गो वा समान गुणत्वात्; दोषाहि दूषणैः समानाः।

When these (several) factors get provoked, they bring about innumerable specialities of the disorders on account of the details (lit. the specialities) of the excitation and the diversities (lit. the specialities) of the vitiated materials. And these disorders (in turn) both psychic like lust and the like and the somatic like the fever and the like following one another occasionally occur together. However this togetherness or concurrence is invariable (not occasional) for passion and delusion; delusion will not get activated without passion. Probably, for the vitiations of the body that have a single seat, a synergic effect or at least a contact among them is (quite) probable, because (they all tend to have many) common qualities (because of the commonness of the seat) Cs. vi. 6.7-10.

20. तत्र अनुबन्ध्यानु बन्धकृतो विशेषः - स्वतन्त्रो व्यक्तलिंगो यथोक्त समुत्थान प्रशमो भवत्यनुबन्धवः, तद्विपरीतलक्षणास्तु अनुबन्धः।

The differential characteristics of primary and secondary affections are as follows : the primary condition is that which is independent, manifests definite symptoms and has an onest and subsidence as laid down. The secondary affection is that which is contrary to this description.

अनुबन्ध्यलक्षणसमन्विता स्तत्र यदि दोषा भवन्ति तत् त्रिकम् सन्निपातम् आचक्षते द्वयं वा संसर्गम्।

If (all) the (three) vitiations become endowed with the characteristics of the secondary affections, that would be spoken as triumverate and synergic, if only two vitiations are thus endowed, it would be (just) contact.

अनुबन्ध्यानुबन्धविशेषकृतस्तु बहुविधो दोष भेदः। एवमेव संज्ञा प्रकृतो भिपजां दोपेषु व्याधिषु च नाना प्रकृतिविशेष व्यूहः।

There are many kinds of differences in the vitiation brought about by the specialities of the primary and the secondary affections. Thus come about the classifications of the various constitutions (i.e. causative factors) as set out by the physicians for the vitiations as well as the diseases. Cs. vi. 6.11.

i. *aetiology and disease process*
(*criteria for etiology.*)

21. इह खलु हेतु र्निमित्तमायतनं कर्ता कारणं प्रत्ययः समुत्थानं निदानमिति अनर्थान्तरम्।
तत् त्रिवधम्-असात्मेन्द्रियार्थ संयोगः प्रज्ञापराधः परिणामश्चेति।

Here indeed (we should note that), reason, instrumental or efficient cause (opposite of *upādana,* the operative or the material cause), abode, agent, cause, ascertainment (ground, basis), symptomatic manifestation, aetiology - these are all alternative terms (to one another). That aetiology (of a disease) is of three kinds:

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non-homologous association (lit. combination) of the sense organs with their objectives, conscious offence (by the patient himself) and cumulative effect or consequence (of many causes). Cs. ni. 1.3

22. एतैः शब्दैः यो अर्थो अभिधीयते तन्निदानमिति।

That meaning which emerges by all of these terms (viz. determination of the reason, instrumental cause and so on with reference to the disease under study) - that is aetiology. Madhukoṣa.

23. अतस्त्रिविधा व्याधयः प्रादुर्भवन्ति आग्नेयाः सौम्याः वायव्याश्चः द्विविधाश्च अपरे राजसाः तामसाश्च।

Three kinds of diseases come about (become manifested) from these (three factors): *pittic, kaphic* and *vātic* : There are two other kinds: *rājasa* and *tāmasa*, according to other authorities. Cs. su. 1.4.

24. तस्य उपलब्धिः निदान पूर्वरूप लिंग उपशय संप्राप्तितः।

The understanding of this disease is by the means of (*four almost chronologically progressive steps for ascertainment in the disease process such as*:) diagnosis of the cause (aetiology), prodrome (the signs that are the forerunners of the particular disease), characteristic symptoms, diagnosis by *upaśaya* (a unique method adopted in Ayurveda, where the diagnosis is sought to be made out by the effect of certain articles of food or medicine given experimentally) and attainment, or the full manifestation at the peak stage. Cs. n. 1.6.

25. तत्र निदानं कारणं इति उक्तं अग्रे।

Therein the aetiology is said to be the instrumental or the efficient cause, earlier. Cs. ni. 1.7.

26. पूर्वरूपं प्रागुत्पत्ति लक्षण व्याधेः।

The characteristics that are found before a disease arises are its prodrome (forerunners) Cs. ni. 1.8

27. प्रादुर्भूत लक्षणम् पुनर्लिङ्.गम्। तत्र लिंगं आकृतिः चिह्नं संस्थानं व्यजनं रूपं इति अनर्थान्तरम्।

When all the characteristics (manifestations of a disease) are fully arisen *that* is: the symptom, the figure, the characteristics, the sign, the aggregate state, the manifestation, the form - all (of these) are the alternative terms here. Cs. ni. 1.9

28. उपशयं पुनः हेतु व्याधि विपरीतानां विपरीतार्थकारिणां च औषधाहार विहाराणामुपयोगः सुखानुबन्धः।

The comfortable use of medicines, foods and (suitable) pastime or recreation as are counter to the cause and the disease and bringing about counter effects, is *upaśaya* or diagnosis by the use of suitable remedies. Cs. ni. 1.10.

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29. संप्राप्तिः जातिः आगतिः इति अनर्थान्तरं व्याधेः ।

The attainment, the category (to which the disease belongs), the onset - these are alternate terms for the disease. Ss. ni. 1.11.

30. सा संख्या प्राधान्य विधि विकल्प बल काल विशेषैः भिद्यते। प्राधान्यं पुनर्दोषाणां तरतमाभ्यामुपलभ्यते। तत्र द्व्योस्तरः, त्रिषु तम इति।

The (differences in) number is - (when we say that) there are 8 (kinds of) fevers, 5 *gulmas* (splenic enlargements), 7 *kuṣṭas* (skin afflictions) and so on and so forth. (Differences by) dominance is: obtained by the more or less (nature) of the vitiations (concerned), therein, if there are two vitiations, one is more than the other; if three, one is the most dominant.

विधिर्नाम-द्विविधा व्याधयो निजागन्तु भेदेन, त्रिविधस्त्रिदोष भेदेन चतुर्विधाः साध्यासाध्य मृदु दारुण भेदेन।

Kinds are: diseases are of two kinds by the difference, innate or adventious; three kinds, by the difference among the three vitiations; four kinds, by the difference: curable, uncurable, curable with ease, curable with severe treatment.

समवेतानां पुनर्दोषाणां अंशांश बल विकल्पो विकल्पो अस्मिन् अर्थे।

By alternatives is meant the variations in the strength of the many individual components of the vitiations that have assembled together (in that particular disease).

बल काल विशेषः पुनर्व्याधीनां ऋतु अहोरात्र आहारकाल विधिविनियतो भवति।

The speciality of the strength and the time of the diseases is regulated in accordance with the rules of the seasons, the day time or the night time, the food and the time. Cs. ni. 1.12

31. तस्मात् व्याधीन् भिषक् अनुपहतसत्वबुद्धिः हेत्वादिभिर्भावैः यथावदनुबुध्येत।

Therefore the physician should understand the diseases in the senses of the reason and the like, exactly (as indicated), with his mind and intellect unimpaired (i.e. with full concentration).

इति अर्थसंग्रहो निदान स्थानस्य उददिष्टो भवति तं विस्तरेण उपदिशन्तो भूयः तरतमोऽनुव्याख्यास्यामः ।

Thus the sum of the objective of aetiology gets stated. We shall comment upon it again in appropriate place (i.e. with reference to every disease) while teaching in detail in terms of the more and the most. Cs. ni. 1. 13,14

32. निदानार्थकरो रोगो रोगस्यापि उपलभ्यते।
तद्यथा ज्वर संतापाद्रक्तपित्तमुदीर्यते। रक्त पित्तात् ज्वरः ताभ्यां शोपश्चापि उप जायते।
प्लीहाभिवृद्ध्या जठरं जठरात् शोथ एव च। अर्शेभ्यो जठरं दुःखं गुल्म श्चापि उपजायते।

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(*the complexities* :) There also occurs a disease which is itself a cause of another disease. For instance, hemothermia may erupt because of the heat of fever or fever may result from hemothermia and from both of these, even consumption may originate. Abdominal affections may arise from splenic enlargement, edema from the abdominal affections; and, from piles, painful abdominal swelling as well as splenic enlargement (may come about). Cs. ni. 8. 16-18.

33. ते पूर्वं केवला रोगाः पश्चात् हेत्वर्थकारिणः । उभयार्थकरा दृष्टाः तथैव एकार्थकारिणः ।।
कश्चिद्धि रोगो रोगस्य हेतु र्भूत्वा प्रशाम्यति । न प्रशाम्यति चाप्यन्यो हेत्वर्थं कुरुतेऽपि च ।
एवं कृच्छ्रतमा नृणां दृश्यन्ते व्याधिसंकराः । प्रयोगापरिशुद्धत्वात् तथा च अन्योन्य संभवात् ।।

There are diseases which exist as such alone and (those that) become causative to other diseases subseqently. Some are seen to be both of these (types); Others are only either of the two. Some diseases after becoming the cause of another disease will themselves subside (afterwards). There are others which produce yet other diseases but do not themselves subside (still). Thus is seen the (existence of an) admixture of diseases in human beings and this becomes most formidable for treatment because of the complexity of the line of treatment (one has to adopt) and as they (i.e. the mixed up diseaseds, will now) act as causative factors to one another. Cs. ni. 8.20-22.

प्रयोगः शमयेद् व्याधिं योऽन्यमन्यमुदीरयेत् । नासौ विशुद्धः शुद्धस्तु शमयेद्यो न कोपयेत् ।

The course of treatment which cures the original disease but produces some one or the other complication is not the correct line of treatment; the correct one is that which cures but does not provoke (any thing else, additionally). Cs. ni. 8.23

34. एको हेतु रनेकस्य तथैकस्यैक एवहि । व्याधेरेकस्य चानेको बहूनां बहवोऽपि च ।।
ज्वर भ्रम प्रलापाद्या दृश्यन्ते रुक्ष हेतुजाः । रुक्षेणैकेन चाप्येको ज्वर एव उपजायते ।।
हेतुभिर्बहुभि श्चैको ज्वरो रूक्षादिभिर्भवेत् । रूक्षादिभिर्ज्वराद्याश्च व्याधयः संभवन्ति हि ।।

A single cause may lead to many diseases or a single cause may lead to only one disease. A single disease may have many causes or many (diseases) may have many causes. (An illustration:) Fever, giddiness, delirium and the like are seen to be due to one cause - the (general) dryness (or *rūkṣata* in the body constitution). From this same cause of dryness, fever alone may come about. Fever is (also) produced by dryness and many (other) similar causative factors and fever and many other diseases (besides), are produced by dryness and many (other) similar causative factors (as well). Cs. ni. 8.24-26.

35. लिंगं चैकमनेकस्य तथैवैकस्य लक्ष्यते । बहून्येकस्य च व्याधेर्बहूनां स्युर्बहूनि च ।।
विषमाराम्भमूलानां लिंगमेकं ज्वरो मतः । ज्वरस्यैकस्य चाप्येकः सन्तापो लिंगमुच्यते ।।
विषमारम्भमूलैश्च ज्वर एको निरुच्यते । लिंगैरेतैर्ज्वर श्वास हिक्काद्याः सन्ति चामयाः ।।

There is seen to be a single symptom common to many diseases or (there may be only) one symptom, pathognomic to one disease alone. There may be many symptoms for one disease or there may (also) be many symptoms common to many diseases. (Illustrations:) One symptom i.e. fever is considered (to be), the common

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symptom for many diseases having an irregular onset. Rise in temperature is spoken to be the pathognomic symptom of one disease – fever. Irregular onset and similar other symptoms (are sometimes seen to be) as the signs of the disease, fever, while (exactly) similar symptoms also occur in (other, quite different diseases such as) severe dyspnea, hiccup and the like. Cs. ni. 8. 27–29.

36. एका शान्तिरनेकस्य तथैवैकस्य लक्ष्यते। व्याधेरेकस्य चानेका बहूनां बहव एव च।
शान्तिरामाशयोत्थानां व्याधीनां लंघन क्रिया। ज्वरस्यैकस्य चाप्येका शान्तिर्लङ्घनमुच्यते।।
तथा लघ्वशनाद्याश्च ज्वरस्यैकस्य शान्तयः। एताश्चैव ज्वर श्वास हिक्कादीनां प्रशान्तयः।।

It is seen that a single remedy may alleviate many diseases or there may be only one remedy for one particular disease. (Similarly) there may be many remedies for one disease and many remedies for many diseases. (For instance lightening therapy is considered (to be) the only remedy for fever. Similarly, lightening and other therapies are used for alleviating the disease fever and all these measures may be used for alleviating a number of diseases like fever, dyspnea, hiccup and the like. Cs. ni. 8, 30–32.

37. सुख साध्यः सुखोपायः कालेनाल्पेन साध्यते।
साध्यते कृच्छ्र साध्यास्तु यत्नेन महता चिरात्।।
याति ना शेषतां व्याधिरसाध्यो याप्य संज्ञितः।
परो असाध्यः क्रियाः सर्वाः प्रत्याख्येयो अतिवर्तते।।
नासाध्यः साध्यतां याति साध्यो याति तु असाध्यताम्।
पादापचारात् दैवाद् वा यान्ति भावान्तरं गदाः।।

An easily curable disease is cured by easy measures and in a short period while formidable diseases are cured only by great efforts and after a long period. The disease which does not completely disappear on treatment, belongs to the mitigatable class of incurable disease; while the other class of the incurables where no treatment is of any avail is called irremediable. Incurable diseases never become curable while curable diseases may pass into the stage of incurability due to the shortcomings on any of the four basic therapeutic factors (*viz., the defects of the physician, the medicine, the nursing staff or the patient himself*) or as a result of destiny. Cs. ni. 8. 33–35.

38. वृद्धि स्थान क्षयावस्थां रोगाणामुपलक्षयेत्।
सुसूक्ष्मामपि च प्राज्ञो देहाग्नि बल चेतसाम्।
व्याध्यवस्थाविशेषान् हि ज्ञात्वा ज्ञात्वा विचक्षणः।
तस्यां तस्यामवस्थायां चतुः श्रेयः प्रपद्यते।।

The wise physician should carefully investigate even the minutest changes in the hypertrophy, the normalcy and the atrophy of, the morbid element as well as the strength of the body, the digestive ability, the (general) vitality and the mind (of the patient). The circumspect physician observing the variations in these stages of the disease again and again (besides all the other foregoing factors) should prescribe such lines of treatment at each and every stage as are helpful in attaining the fourfold blessing of therapeusis. 36.37.

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39. प्रायः तिर्यग्गता दोषाः क्लेशयन्ति आतुरान् चिरम्।
तेषु न त्वरया कुर्यात् देहाग्निबलवित् क्रियाम्।।
प्रयोगैः क्षपयेद्वा तान् सुखं वा कोष्ठमानयेत्।
ज्ञात्वा कोष्ठप्रपन्नान् तान् यथासन्नं हरेत् बुधः।।

In general, the morbid vitiations that have spread sideways (i.e. horizontally, from the original locus of the disease), afflict the patient for a long time. For them, the physician cognisant of the nature of the body, the digestive ability and the (general) vitality (of the patient) should not be in a hurry to counteract. (Instead) they should be eliminated by a slow course of treatment or drawn painlessly into the alimentary tract; after ascertaining that they have entered the alimentary tract, the wise physician should eliminate them (fully out) through the nearest passage of exit. Cs. ni. 8 38. 39.

40. ज्ञानार्थं यानि चोक्तानि व्याधिलिंगानि संग्रहे।
व्याधयस्ते तदात्वे तु लिंगानि इष्टानि न आमयः।।
विकारः प्रकृति श्चैव द्वयं सर्वं समासतः।
तत् हेतु वशगं हेतोरभावात् नानुवर्तते।।

In this epitome of description of the diseases, some of those that have been mentioned as the symptoms of diseases appear as independent diseases; as long as they exist secondarily, they are called symptoms and not diseases. In short, everything in this world has only two conditions, abnormal and normal; both of them are dependent on a cause. Nothing can happen in the absence of a cause. Cs. ni. 8. 40, 41.

41. ज्ञानार्थं यानि चोक्तानि व्याधिलिंगानि संग्रहे। व्याधयस्ते तदात्वे तु लिंगानीष्टानि नामयः।।

What is spoken of as the symptom of a disease in this section on diseases, if it (for e.g. anorexia) occurs by itself (unassociated with any other disease) should be considered as a disease by itself and not, a mere symptom. Cs. ni. 8. 40.

42. सम्प्राप्तिस्तु रोगस्योत्पत्तिरागतिर्वा यथा दुष्टेन दोषेण देहे चानुविसर्पता येन प्रकारेणाऽऽमयस्य निर्वृत्तिः स प्रकारः।

How has the vitiation concerned become morbid and in what manner has this become manifested as a disease, as it courses through the body and by the speciality of the site in question - this is pathogenesis. (Ah. ni. 1.6.)

43. तत्र संख्यासंप्राप्तिर्यथा अष्टौ ज्वराः पंच कासाः। प्राधान्यसंप्राप्तिर्यथा स्वातत्र्य पारतन्त्र्याभ्यामनुबन्ध्यनुबन्ध भेदात्तरतमयोगाद्व व्याधीनां प्राधान्या प्राधान्ये ताभ्यां भिद्यमाना तद्विशेषा वा संप्राप्तिः। विकल्पो नाम वातादि दोषाणामेकस्मिन् व्याधौ समवेतानां अंशांशकल्पना तद्विशिष्टा विकल्पसंप्राप्तिः। बलविशेषा संप्राप्तिर्यथा हेतुपूर्वरूपादीनां तुलवया व्याधेर्बलाबलत्व विनिश्चयो बल संप्राप्तिः। काल विशेषा संप्राप्तिर्यथा दोषाणामृत्व होरात्राहारसमय नियतः प्रकोपः कालविशेषा संप्राप्तिः।

Therein, the etiology in terms of number is such as " there are eight types of fever, and six types of cough" . Etiology by dominance is: the pathogenesis as the

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diseases get differentiated or specialised into the predominant and the negligible or by their being independent or dependent or on what is the accompanying or the accompanied or, by the combinations of the different gradations. Etiology by alternatives is as follows: by alternatives is meant the varied minutae of the three vitiations of *vāta, pitta* and *kapha* as they get together in one single disease. Etiology by strength is the determination of the strength or the weakness of the disease in comparison with the reasons and the manifestations involved. Etiology by time is: the aggravation of the vitiations as controlled by the season , the day and the night and the time of taking food. As. su. 1.13, 14.

44. प्रसगात् गात्र संस्पर्शात श्वासात् सहभोजनात्। सहशय्यासनाच्चापि वस्त्रमाल्यानुलेपनात्।।
कुष्ठं ज्वरश्च शोषश्च नेत्राभिष्यन्द एव च। औपसर्गिकरोगाश्च संक्रामन्ति नरान्नरम्।।

(contagious disease:) Contagious or a spreading disease is a disease originating by an occassional circumstance , contact of the body, breath, eating together , sleeping or sitting together and by using the same dress, garland and cosmetics. (For example) skin diseases, fever, consumption, conjunctivitis and also the infectious ones such as the small pox and the like. Ss. ni. 5. 34.

45. उपद्रवस्तु खलु रोगोत्तरकालजो रोगाश्रयो रोग एव स्थूलोऽणुर्वा रोगात् पश्चात् जायत इत्युपद्रव संज्ञः। तत्र प्रधानो व्याधिः व्याधेर्गुणभूत उपद्रवः तस्य प्रायः प्रधान प्रशमे प्रशमो भवति स तु पीडाकरतरो भवति पश्चादुत्पद्यमानो व्याधिपरिक्लिष्ट शरीरत्वात्; तस्मात् उपद्रवं त्वरमाणोऽभिबाधेत।

(*complications, a supervenient disease and upadrava, that which runs near or towards* :)

This (is a disease that) runs near or towards (a major disease) i.e. comes near a disease that is getting formed- hence, called *upadrava* or a run-after-disease - (also) because of the origin which is subsequent to a disease. A supervenient (disease) is indeed born after the time of a disease or with a (previous) disease as its resting place or is itself infact, a disease. Therein, the (previous) disease is (of) the principal (importance). A supervenient disease that is of the same qualities as the principal probably quietens down when the principal is subdued. In fact, this becomes more tormented as it is developing later and in a body (that is already) tormented by (another) disease. Therefore one should quickly attend to the supervenient disease. Cs. ci. 21.40.

46. व्याधेरुपरि यो व्याधिर्भवति उत्तरकालजः।
उपक्रमाविरोधी च स उपद्रव उच्यते।।

The disease that occurs over and above a disease and afterwards in time and not counteracting the (medicative) measures (taken up for the previous disease) is called a superventient disease. Ss. u. 31. 290.

47. पूर्वोद्भवनिमित्तेन योऽपरो जायते गदः। तमुपद्रवमित्याहुः अतिसारो यथा ज्वरे।।

That another ailment that arises as the earlier arising disease as its cause - this is called a supervenient disease, as for intance, diarrhoea in fever. Ka. su. 27. 57.

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सुख साध्यं मतं साध्यं कृच्छ्र साध्यं अथापि चाद्विविधं चापि असाध्यंस्यात् याप्यं यच्च अनुपक्रमम्।।
साध्यानां त्रिविधश्च अल्पमध्यमोत्कृष्टतां प्रति। विकल्पो न तु असाध्यानां नियतानां विकल्पना।।

(*prognosis - a general rating ; classification:*) Easily cured and cured with difficulty - the curable (disease) is of these two kinds. The incurable is also (of two kinds:) the mitigatable and the non-commenceable (where not even the commencing of treatment is needed as its futility is fully known). The curable (diseases) are of three kinds; the mild, the medium and the sophisticated-depending (upon the types of the medication needed). There is no categorisation for the incurable, where the non-curing is undoubted.

हेतवः पूर्व रूपाणि रूपाणि अल्पानि यस्य च न च तुल्यगुणो दोषो न दोषः प्रकृतिभवित्।।
न च कालगुणैः तुल्यो न देशो दुरुपक्रमः। गतिरेका नवत्वं च रोगस्य उपद्रवो न च।।
दोषश्च एकः समुत्पत्तौ देहः सवौषधिः क्षमः। चतुष्पादोपपत्तिश्च सुखसाध्यस्य लक्षणम्।।

(*curable with ease* :) Where the reasons, the prodromic features and the final expressions (of the disease) are all mild, the vitiators and the vitiated are not of the same quality, the vitiating is not of the same nature as that of the patients' constitution, it is not yet time for the root cause to get aggravated (in its full natural course), the region of affliction is not difficult for access and treatment, the course of the progression of the disease is directed in a single way, the disease is fresh and not yet accompanied with secondary complications, the aggravated vitiation is single, the body is capable of tolerating all measures of medication and there is the availaibility of the full quartet of medical treatment - these are the characteristics of an easily curable disease.

निमित्तपूर्व रूपाणां रूपाणां मध्यमे बले। काल प्रकृति दूष्याणां सामान्ये अन्यतमस्य च।।
गर्भिणी वृद्धिबालानां नाति उपद्रव पीडितम्। शस्त्रक्षाराग्नि कृत्यानां अनवं कृच्छ्रदेशजम्।।
विद्यादेकपथं रोगं नातिपूर्ण चतुष्पदम्। द्विपथं नाति कालं वा कृच्छ्र साध्यं द्वि दोषजम्।।

(*curable with difficulty* :) Where the imminent cause, the prodromic features and the final symptomatic expression (of the disease) are of medium strength; there is a matching between the disease causing vitiation and any of (the three viz.) time, constitution and the vitiated; the diseases are of the infant, the pregnant and the old; the disease is not much troubled with the secondary afflictions (and is) treatable by surgery, caustics and cautery, or old (and) born in a diffcult region (i.e. not easily accessible); the progression of disease is of a single path and the complete presence of the quartet of treatment is not there (or) the disease (is) of two paths but not very old, and born of two vitiations - these can be cured with difficulty.

शेषत्वादायुषो याप्यं असाध्यं पथ्यसेवया। लब्धाल्पसुखमल्पेन हेतुना आशु प्रवर्तकम्।।
गम्भीरं बहुधातुस्थं मर्म सन्धिसमाश्रितम्। नित्यानु शायिनं रोगं दीर्घकालमवस्थितम्।।
विद्यात् द्विदोषजम्।

Where the disease recurs immediately after becoming slightly better due to the taking in of the salutary (food and measures) and since there is some span of life still left; the disease is deep and settled in many constituents or situated in

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vulnerable regions and joints; the disease recurs in bouts again and again, or continues to exist for a long time and is born of two vitiations - these are (incurable but) mitigatable.

तद्वत् प्रत्याख्येयम् त्रिदोषजम्। क्रियापथमतिक्रान्तं सर्वमर्मानुसारिणम्।।
औत्सुक्यारति संमोहकरं इन्द्रियनाशनम् दुर्बलस्य सुसंवृद्धं व्याधिं सारिष्टमेव च।

Similarly, the counteractable disease is born of three vitiations; it has crossed the (limits of) pathway of the medicative measures; follows all the vulnerable regions; causes anxiety, disinterest and swooning or loss of senses; it is of a weak person, very well grown and accompanied with fatal signs. Ca. su. 10. 9-20.

त्रयो रोगमार्गा इति - शाखा मर्मास्थिसन्धयः कोष्ठश्च। तत्र शाखा रक्तादयो धातवः त्वक् च स बाह्यो मार्गः मर्माणि पुनर्बस्ति हृदय मूर्धादीनि अस्थि सन्धयोऽस्थिसंयोगाः तत्र उपनिबद्धाश्च स्नायुकण्डराः स मध्यमो रोग मार्गः कोष्ठः पुनरुच्यते महास्रोतः शरीरमध्यं महानिम्नं आमपक्काशय श्चेति पर्याय शब्दै स्तन्त्रे स रोगमार्ग आभ्यन्तरः।

(j) (*pathology - course of the progression of the diseases*:)

Three are the pathways through which the diseases spread: the rami, (i.e. the arms and the legs), the vulnerables and the bone joints and the viscera, the seven *dhātus* from blood onwards (bone, bone marrow and so on) and the skin. This is the peripheral passage way of the diseases. Bladder, heart and head are the vulnerables; the bone joints are the regions where the (different) bones combine and also the tendons and chords situated there. This is the middle passage for the diseases. The viscera are the great channel, the middle of the body, the great hollow, the stomach and the intestines (viz. the alimentary tract) all being the alternative terms in the technical treatise. This passage of the diseases is internal. Cs. su. 11.48.

गण्ड पिडकालज्यपचीचर्मकीलाधिमांस मषक कुष्ठ व्यंगादयो विकारा बहिर्मागजाश्च विसर्पश्वयथुगुल्मार्शो विद्रध्यादयः शाखानु सारिणो भवन्ति रोगाः।

Goitre, pustules, inflammation of the eye at the edge of the cornea, glandular enlargement of the neck, skin wart, proud flesh or cancer especially in the eyes or back part of the gums, the skin disease where dark bean-like pustules or eruptions arise, dermatitis, freckles in the face and the like are born in the peripheral passages and erysipelas, swelling, splenic enlargement, piles, abscesses and the like, these are all the diseases that spread following the (natural) ramifications (within the body).

पक्षवध ग्रह आपतानक आर्दित शोष राजयक्ष्मा अस्थिसन्धि शूल गुदभ्रंशादयः शिरोहृद्बस्ति रोगादयश्च मध्यममार्गानु सारिणो भवन्ति रोगाः।

Paralysis, paralytic seizure, convulsive fits, spasms of the jaw bones, pulmonary consumption, shooting pain of the bones and the joints, prolapse of the rectum and the like, diseases of the head, the heart, the bladder, and the like are the diseases that spread along the middle passage.

ज्वर अतीसारच्छर्दि अलसक विसूचिका कास श्वास हिक्का आनाह उदर प्लीहादयः अन्तर्मार्गजाश्च विसर्प श्वयथु गुल्म अर्शो विद्रध्यादयः कोष्टानुसारिणो भवन्ति।

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Fever, diarrhoea, vomiting, flatulence (intumesence of the abdomen with constipation and gases), indigestion attended with evacuation in both the directions (cholera in its sporadic form), cough, dyspnea, hiccough, constipation, enlargement of the abdomen, spleen and the like are born in the internal passage. Eryspelas, intumescence, glandular enlargement (of the spleen), piles, abscesses and the like are the diseases that follow the internal passage (of spread). Cs. su. 11.49.

त्रीणि आयतनानीति-अर्थानां कर्मणः कालस्य च अतियोग अयोग मिथ्यायोगाः।

(*abodes*:) Three are the abodes of the diseases - excessive, non and defective combination of the sense-objectives, the activities and the time. Cs. su. 11.37.

तत्र अतिप्रभावतां दृश्यानां अतिमात्रं दर्शनं अतियोगः सर्वतोऽदर्शनं अयोगः अतिश्लिष्ट अतिविप्रकृष्ट रौद्र भैरव अद्भुत द्विष्ट बीभत्सन विकृत वित्रासनादि रूप दर्शनं मिथ्या योगः।

Therein, too much seeing of exceedingly shining sights is excessive indulgence (of the sense of eye); non-seeing at all is non-indulgence; and, seeing the forms that are very close or very far, fierce, terrible, stupendous, hateful, nauseating, distorted, tiresome and the like is a defective indulgence. (similar examples for the other senses of hearing, smell, taste and touch are given). Cs. su. 11.37.

कर्म वाङ्मनः शरीर प्रवृत्तिः। तत्र वाङ्मनः शरीराति प्रवृत्तिरतियेगः सर्वतोऽप्रवृत्तिः अयोगः वेग धारणो दीरण विषम स्खलन गमन पतनांग प्रणिधानांग्ड् प्रदूषण मर्दन प्राणोपरोधन संक्लेशनादिः शारीरो मिथ्यायोगः सूचकानृत अकाल कलह अप्रिय अबद्ध अनुपचार परुष वचनादिः वाङ्मिथ्या योगः,
भय शोक क्रोध लोभ मोह मान इर्ष्या मिथ्यादर्शनादिः मानसा मिथ्या योगः।

(Indulging in an) activity is the (natural) tendency of speech, mind and body. Therein, too much engagement in these tendencies in speech, mind and body is an excessive indulgence and non engagement in them in any way is non indulgence. Suppression of the (non suppressible) urges, compulsively venting forth (the urges of vomiting, belching, etc) that have really not been formed (to the degree needed), slipping down, walking, falling down or employing one's organs - all in a crooked way, getting tainted by the touch of others, getting hit, or pounded down, holding breath almost to the point of taking away (one's) life, the sufferings (due to fasting, vows, etc.) and the like are the defective indulgence of the body. Taunting, false, untimely, quarrelsome, unpleasant, inconsistent, nonsolicitary, harsh words and the like are the defective indulgence in speech. Fear, grief, anger, greed, infatuation, prestige, jealousy, wrong perception and the like are the defective indulgence in mind. Cs. su. 11.39.

संग्रहेण च अतियोग-अयोग-वर्जं कर्म वाङ्मनः शरीरजं अहितं अनुपदिष्टं यत्तच्च मिथ्या योगं विद्यात्।

In brief, whatever that are there excluding the excessive and the non indulgence and born of the activities, speech and body (that are) unwholesome and not specified here-that is all defective combinations. Cs. su. 11.40.

इति त्रिविधविकल्पं त्रिविधमेव कर्म प्रज्ञापराध इति व्यवस्येत्।

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This way, the three alternatives (excessive, non and defective indulgence) and the three activities (of speech, mind and body) - these themselves are to be dealt with as conscious offences (viz., an offence committed knowingly by the patient - held to be the chief cause of many diseases). Cs. su. 11.41

त्रयो रोगा इति निज आगन्तु मानसाः । तत्र निजः शारीर दोष समुत्थः आगन्तुः भूत विप वायु अग्नि संप्रहारादि समुत्थः मानसः पुनरिष्टस्य लाभाल्लाभात् च अनिष्टस्य उप जायते ।

(*kinds* :) Three are the kinds of the diseases - innate, adventitious and mental. Innate is what has arisen due to the vitiation of the body. Adventitious arises due to spirits, poison, gas, fire and hitting. Mental comes about by the non-securing of what is desired and securing of what is not desired.

तत्र बुद्धिमतांमानस व्याधि परीतेनापि सदा बुद्ध्याहिताहित मवेक्ष्य अवेक्ष्य धर्मार्थकामानां अहितानां अनुप सेवने हितानां च उप सेवने प्रयतितव्यं न हि अन्तरेण लोके त्रयमेतन्-मानसं किंचिन् निष्पद्यते सुखं वा दुःखं वाः तग्मात् एतत् च अनुष्टेयं-तद्विधानां च उपसेवने प्रयतितव्यम् आत्म-देश काल बल शक्ति ज्ञाने यथावत् च इति ।

The intelligent man, even when he is afflcted with a mental disease, should always see for himself by his own intelligence what is wholesome and what is not and what is suitable for securing religious merit, economic prosperity and personal desire, and seeing thus carefully should strive forth not to indulge in the unwholesome and cultivate the wholesome. For in this world these is nothing else that affects the mind other than these three objectives (of securing *dharma* , economic prosperity and personal desire) - either for happiness or for grief. Therefore he should also practice this: a striving to take shelter under the experts for curing the mental diseases and also to secure a proper perspective and knowledge as it actually exists, of the self, his own place, family, time, strength and capacity.

मानसं प्रति भैपज्यम् त्रिवर्गस्य अन्ववेक्षणम् । तद्विद्यसेवा विज्ञानं आत्मादीनां च सर्वशः ।।

The medicine counteracting the mental (disease) is: the requisite inspection of the three pursuits (of religion, economics and desire), taking shelter of the experts in curing the mental diseases and a full knowledge of the self and the like, in all ways.

काल बुद्धि इन्द्रियार्थानां योगो मिथ्या न च अति च । द्व्याश्रयाणां व्याधीनां त्रिविधो हेतु संग्रहः ।

In causing the origin of diseases in their two fold basis (of the body and the mind), these three reasons in brief are responsible: the defective combination, the non-combination and the excessive combination of the (factors of) time, intellect and the sensors with their respective objects. Ca. su. 1.54.

शरीरं सत्वसंज्ञं च व्याधीनां आश्रयो मतः । तथा सुखानां योगस्तु सुखानां कारणं समः ।

The receptacle of disease is: considered to be the body and what we call the mind, and so also for the happiness. An equitable employment or conjoining (of the times, the intellect and the sensors with their respective objects) is the cause of happiness . Ca. su. 1.55

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वायुः पित्तं कफश्चोक्तः शारीरो दोष संग्रहः । मानसः पुनरुद्दिष्टो रजश्च तम एव च।

Vayu, pitta and *kapha* - these constitute the (entire) collection of the morbidities in the body. Of the mind (however), only *raja* and *tama* (constitute such factors for morbidity.) Ca. su. 1.57.

प्रशाम्यति औषधैः पूर्वो दैव युक्तिव्यपाश्रयैः । मानसो ज्ञान विज्ञान धैर्य स्मृति समाधिभिः ।

The diseases of the former (i.e. body) are mitigated by medicines or taking recourse to gods or devices (e.g. of proper food or conduct). The diseases of the mind are mitigated by the attainment of the proper understanding of the malady by the patient, recourse to specialised knowledge and the assumption of an attitude of fortitude, proper recollection and bearing in mind and the required contemplation (by the patient). Cs. su. 1.58.

k. *behavioural causes of diseases, non suppressable natural urges:*

न वेगान् धारयेत् धीमान् जातान् मूत्र पुरीषयोः । न रेतसो न वातस्य न च्छर्दया क्षवथोर्न च।
नोद्गारस्य न जृम्भाया न वेगान् क्षुत् पिपासयोः । न बाष्पस्य न निद्राया निःश्वासस्य श्रमेण च।
एतान् धारयतो जातान् वेगान् रोगा भवन्ति ये। पृथक् पृथक् चिकित्सार्थं तन्मे निगदतः श्रुणु।

A wise person should not suppress the natural urges after they have commenced, for urine and faeces, semen, flatus, vomiting, sneezing, eructation, yawning or of hunger and thirst, tears, sleep and deep breathing-out after exertion. Listen, as I describe one by one for purpose of treatment the several diseases which are born of the suppression of these urges.

बस्ति मेहनयोः शूलं मूत्र कृच्छ्रं शिरोरुजा। विनामो वंक्षणानाहः स्याल्लिङ्गं मूत्र निग्रहे।।
स्वेदावगाह नाभ्यगान सर्पिपश्च अवपीडनम्। मूत्रे प्रतिहते कुर्यात् त्रिविधं बस्ति कर्म च।।

Shooting pain at the region of the bladder and the genitals, micturition with difficulty (dysuria?), headache, flexure of the body (due to unbearble pain) and retention of urine causing distension at the groins are the symptoms that arise by suppressing the urge for urination. Sudation, immersion-bath, inunction (of the whole body, beginning from the head), an oppressive dose of ghee and the three kinds of enema (two kinds of rectal enema and one of urethral douche) are to be carried out in retention of urine.

पक्काशय शिरः शूलं वातवर्चोऽप्रवर्तनम्। पिण्डिकोद्वेष्टनाध्मानं पुरीषे स्यात् विधारिते।।
स्वेदाभ्यङ्ग अवगाहाश्च वर्तयो बस्तिकर्म च। हितं प्रतिहते वर्चसि अन्नपानं प्रमाथि च।।

Shooting pain at the intestine (viz. colic) and head, non-starting of flatus and faeces, a writhing pain at the calf muscles and a bloating of the abdomen arise if the urge for defaecation is suppressed. Sudation, inunction, immersion-bath, suppositories, enema and carminative eats and drinks are beneficial when the urge for the faeces is restrained.

मेढ्रे वृषणयोः शूलं अंगमर्दो हृदि व्यथा। भवेत् प्रतिहते शुक्रे विबद्धं मूत्रमेव च।।
तत्राभ्यंगोऽवगाहश्च मदिरा चरणायुधाः। शालिः पयो निस्हश्च शस्तं मैथुनमेव च।।

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Shooting pain at the penis and the testes, body-ache, cardiac pain and retention of urine arise from the suppression of the urge for seminal discharge. Therein inunction, immersion-bath, *madira* wine, flesh of cocks, *śāli* rice, milk and evacuative enema and coitus are recommended.

संगो विण्मूत्रवातानामाध्मानं वेदना क्लमः । जठरे वातजाश्च अन्ये रोगाः स्युः वात निग्रहात् ।
स्नेह स्वेद विधिस्तत्र वर्तयो भोजनानि च । पानानि बस्तयश्चैव शस्तं वातानुलोमनम् ।।

Retention of faeces, urine and flatus, distension of abdomen, pain, exhaustion and other disorders in abdomen caused by *vāta* result from suppression of the urge for flatus. The procedures of oleation and sudation, suppositories, carminative eats and drinks and enemata are recommended to set right this *vāta* (retention).

कण्डू कोठारुचि व्यङ्ग शोथ पाण्ड्वामय ज्वराः । कुष्ठ हृल्लास वीसर्पाश्छर्दि निग्रहजा गदाः ।
भुक्त्वा प्रच्छर्दनं धूमोलंघनं रक्त मोक्षणम् । रूक्षान्न पानम् व्यायामो विरेकश्चात्र शस्यते ।।

Pruritis, wheals, anorexia, freckles, oedema, anemia, fever, dermatosis, nausea, acute spreading affections result from supression of the urge for vomiting. Vomiting after taking food, smoking, fasting, depletion of blood, dry eats and drinks, physical exercise and purgation are recommended.

मन्यास्तम्भः शिरः शूलमर्द्धितार्धावं भेदकौ । इन्द्रियाणां च दौर्बल्यं क्षवथोः स्यात् विधारणात् ।।
तत्रोर्ध्वजत्रुकेऽभ्यंगः स्वेदो धूमः सनावनः । हितं वातघ्नमाद्यं च घृतं चौत्तर भक्तिकम् ।।

Stiffness of the neck, headache, facial paralysis, hemicrania and weakness of the sense organs arise from the suppression of the urge for sneezing. Inunction, sudation of the supra clavicular parts of the body, smoking, nasal medication, diet alleviative of *vāta* and post prandial potion of ghee are wholesome.

हिक्का श्वासोऽरुचिः कम्पो विबन्धो हृदयोरसोः । उग्दार निग्रहात्तत्र हिक्कायास्तुल्यमौषधम् ।।

Hiccup, dyspnea, anorexia, tremor, clamping at the heart and the chest (result) from suppression of the urge for eructation. Remedial measures thereon are similar to those of hiccup.

विनामा क्षेप संकोचाः सुप्तिः कम्पः प्रवेपनम् । जृम्भाया निग्रहात् तत्र सर्वं वातघ्नमौषधम् ।।

Flexure of the body due to pain, spasm, contractions, numbness, tremor and shaking result from the suppression of the urge for yawning. Therein all such measures as are alleviative of *vāta* (are indicated).

कार्श्य दौर्बल्य वैवर्ण्यमंगमर्दोऽरुचिभ्रमः । क्षुत् वेग निग्रहात्तत्र स्निग्धोष्णं लघु भोजनम् ।।

Emaciation, weakness, discolouration, body-ache, anorexia and giddiness (arise) by suppression of the urge for hunger. Unctuous, hot and light food is recommended here.

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कण्ठास्य शोषो बाधिर्यं श्रमः सादो हृदि व्यथा। पिपासा निग्रहात् तत्र शीतं तर्पणमिष्यते।।

Parching of the throat and the mouth, deafness, fatigue, depression, cardiac pain result from the suppression of the urge for thirst. Cooling and demulcent drinks are recommended here.

प्रतिश्यायोऽक्षिरोगश्च हृद्रोगश्चारुचिर्भमः। बाष्प निग्रहणात् तत्र स्वप्नो मद्यं प्रियाः कथाः।।

Coryza, eye-diseases, cardiac disorders and giddiness arise by suppression of the urge for shedding tears. Sleep, wine and pleasing talk are recommended, here.

जृम्भाऽङ्गमर्दस्तन्द्रा च शिरोरोगोऽक्षिगौरवम्। निद्राविधारणात् तत्र स्वप्नः संवाहनानि च।।

Yawning, body-ache, torpor, disease of the head and heaviness of the eyes result from suppressing the urge for sleep. Sleep and massage are recommended here.

गुल्म हृद्रोग संमोहाः श्रमनिःश्वासधारणात्। जायन्ते तत्र विश्रामो वातघ्न्यश्च क्रिया हिताः।।

Gulma, (i.e. splenic enlargement), cardiac disorders and stupefaction result from suppressing the urge for deep breathout after exertion. Rest and measures alleviative of *vāta* are recommended.

वेग निग्रहजा रोगा य एते परिकीर्तिताः। इच्छन् तेपामनुत्पत्तिं वेगानेतान्न धारयेत्।।

One who desires a non-occurrence of these diseases mentioned above should not suppress these urges. Cs. su. 3.25.

Suppressable natural urges:

इमान् तु धारयेत् वेगान् हितार्थी प्रेत्य चेह च। साहसानामशस्तान्नां मनोवाक्काय कर्मणाम्।।

He who desires welfare both in this as well as the next world should definitely suppress the rash and uncivil impulses of mind, speech, body and behaviour. Cs. su. 7.26.

I. *some miscellania*

"व्याधि दुर्भिक्षयो र्व्याधिः प्रेतव्याधितोप सृष्ट परिचारकव्यायामोपरोधेन कर्माणि उपहन्ति दुर्भिक्षं पुनः अकर्मोप घाति हिष्रण्य पशुकरदायि च" इत्याचार्याः। नेति कौटिल्यः एकदेशपीडनो व्याधिः शक्यप्रतीकारश्च सर्वदेश पीडनं दुर्भिक्षं प्राणिनामजीवनायेति।।

तेन मरको व्याख्यातः।

(*epidemics and society*) "Of disease and famine, disease ruins undertakings by hindering the activity of the workers who die or are sick or afflicted, whereas famine does not ruin undertakings and yields taxes in money and cattle" say the teachers. 'No', says, Kautilya "Disease afflicts only one region and remedies can be found for it, while famine afflicts the whole country and leads to absence of livelihood for living beings. By that is explained epidemics." Ca. 8.4.5-8

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"अपि तु खलु जनपदोद्धंसनमेकेनैव व्याधिना युगपत् असमान प्रकृत्याहार देहबल सात्म्य सत्व वयसां मनुष्याणां कस्मात् भवतीति।।"

"But, how does a simultaneous destruction of a whole population come about by a single disease alone, consisting as it does of a large mumber of individuals who differ from one another in constitution, diet, physique, vitality, habits, psychic make up and age?"

तमुवाच भगवानात्रेयः-एवमसामान्यवतामप्येभिरग्निवेश प्रकृत्यादिभिर्भावैर्मनुष्याणां येऽन्ये भावाः सामान्यास्तद्वैगुण्यात् समानकालाः समानलिंगाश्च व्याधयोऽभिनिवर्तमाना जनपद मुद्ध्वसयन्ति।

Unto him the revered Atreya spoke: though heterogeneous in this way in respect of the constitution and so on, there are other common factors which being adversely affected will destroy a whole population by an outbreak of diseases that have similar symptoms and acting at the same time.

ते खल्विमे भावाः सामान्या जनपदेषु भवन्तिः तद्यथा-वायुः उदकं देशः काल इति।

These happen to be the factors that affect a people in common; such as, the winds, the waters, the country (i.e. the geographical region) and the seasons. Cs. vi. 3.5, 6(1), 6.

औषधान्न विहाराणाम् असुखकर उपयोगो रोगेषु अयमुपक्रमो गूढलिंग व्याधीनां परीक्षायाम् उपशयेन साकं प्रयुज्यते।

(*a method of detection of diseases; an upasaya, non-homologation*) Utilisation of uncomfortable medicines, foods and pastimes or recreations in diseases. This is being employed along with homologatory measures in examining (and detecting) diseases whose symptomatic expresssion is obscure.

तत् त्रिविधं प्रवरावरमध्य विभागेनः सप्तविधं तु रसैकैकत्वेन सर्व रसोपयोगात् व। तत्र सर्व रसं प्रवरम् अवरमेक रसं मध्यं तु प्रवरावरमध्यस्थम्।

This (i.e. homologation) is of three kinds - best, poor and medium. It is again of seven kinds - agreeability to each or one of the six tastes and the seventh is, aggreability to all of them combined. Among them, the agreeability to all the tastes is the best type of homologation, the poorest is the agreeability to a single taste; the medium, is the mean between the best and the poorest. Cs. vi. 1.20 (i), 20.

पूर्वकर्मजाः कर्मक्षयादुपशाम्यन्ति प्रत्युत्पन्न कर्मजा हेतु व्याधि विपरीतशीलनात् शाम्यन्ति। सकलोऽपि चायं रोग समूहः प्रतीकारवानायुर्वेदमुपदेशमपेक्षते। यस्मिन्नियत हेतु कोऽप्यामयः सम्यग् भिषगादेशानुष्ठानादुपात्तायुः संस्कार परिक्षये सहयवेदनतां प्रतिपद्यते। अनुपक्रम्यमाणस्तु सर्व एव प्रायशो भनक्त्यकाण्डे। स्वयमपि च दैवात् निदानाऽल्पतया वा निवर्तमानः षोडषगुण समुदित क्रियोपलम्भादाशु अपरि क्लिष्टस्य चाऽपगच्छति। अनियत फलदायिनि तु दैवे हिताभ्यासरतस्यावकाशमेव न लभते व्याधिः। तस्मात् न कस्यां चित् अवस्थायाम् आत्मवान् हिताहितयोः तुल्यदर्शी स्यात्।

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(*mitigation of the disease* :) Diseases due to the acts of the previous birth get mitigated after the decline of the *Karma* concerned. The diseases due to the acts done in this birth itself get mitigated by recourse to measures contrary to the etiology and the disease (concerned). The entirety of the collection of these diseases needs the counter measures as taught in Ayurveda. Even a disease that has a definitive cause will attain a state of tolerable pain if there is the proper practice of the precepts of the physician, if the span of life is still left and if the nursing attendance is not discontinued. He to whom there can be no medicative procedure (along these lines) is possible, will probably die. Or, by itself or, by fate or because the cause itself is of small potency, the disease may leave him immediately by recourse to medicative measures of all the sixteen qualities. But Fate offers a fruit that is not dependable; hence, for a person who has a habit of healthy wholesome practices, the disease will not get even an opportunity (to get in). That is why, in any state whatsoever, a person interested in himself should not consider the wholesome and the unwholesome as (being) equal. A. samg. su. 22.

रोगस्य परीक्षणम् रोगस्य प्रमाणैर्ज्ञानं विनिश्चयो वा। सा परीक्षा प्रत्येक रोगविशेषज्ञानार्थम् इष्यते रोग विज्ञानोपायाः पंच-तेच निदानं पूर्वरूपं रूपमुपशयः सम्प्राप्तिश्च। तत्र निदानं रोगोत्पादको हेतुः सोऽपि द्विविधः आसन्न विप्रकृष्ट भेदात्। तत्र आसन्नो हेतुः कुपिता वातादयः विप्रकृष्टहेतुः दोष-प्रकोपकरमाऽऽहारविहारादि। उत्पित्सुरामयो येन रूपेण लक्ष्यते तत् पूर्वरूपम् यथाऽऽलस्यादि ज्वरस्य पूर्व रूपम् व्याधीनामव्यक्तं लक्षणमपि पूर्व रूपम्। पूर्वरूपमेव व्यक्ततां यातं रूपमित्यभिधीयते रूज्यते सम्यक् ज्ञाप्यते अनेनेति रूपम् लक्षणमिति यावत् रूपावस्थायां वातादि दोषाणां रोगाणां च लक्षणानि सुव्यक्तानि भवन्ति। औपधान्नविहाराणां सुखावह उपयोग उपशयः सहि व्याधेः सात्म्यमिति स्मृतः। विपरीतोऽनुपशयो व्याध्यसात्म्याऽऽभि संज्ञितः। सम्प्राप्तिस्तु रोगस्य उत्पत्तिरागतिः वा यथा दुष्टेण दोषेण देहे च अनुविसर्पता येन प्रकारेण आमयस्य निर्वृत्तिः स प्रकारः। निदानादीनां पंचानां रोगविनिश्चये हेतुत्वंम्। निदानादयः पंच व्यस्ताः समस्ता वा व्याधि बोधका भवन्ति।

(*study* :) Examination of the disease is the knowledge or the analytical ascertainment of the disease in terms of its proportions. Such an examination is desirable so as to know the special features of every one of the diseases. Means of special knowledge of the diseases are five: They are: the etiology, the prodromal form, the symptomatic form, the homologation, and the full manifestation. Etiology is the cause of the disease; this is of two kinds, proximate and remote; proximate causes are the provocated vitiaters, *vāta* and the like; remote causes are the vitiation-provoking foods, pastime, etc. The form in which an oncoming disease appears is the prodromal form; as for instance, lassitude is a prodrome of the fever: the indistinct or obsure characters are also the prodromes. When a prodrome itself becomes explicit, it gets the name, the symptomatic form. This is called the form or the charactertic, because the disease gets formed here, or defined or properly indicated. In this stage of the form, the characteristics of the vitiations of *vāta* and the like become fully visible. A comfortable employment of medicine, food and pastime, is considered as being homologous to the disease concerned. This is contrary in a non-homologous medication. Full manifestation is the (full) understanding of the disease as to how by a morbid vitiation the body is spread out and in what way the specific disease has come about. The aetiogoly and the pe ntad of the above, individually or, as a group as a whole, become responsible to instruct (lit. teach) us about the disease. Ahr. ni.1.2-8.

त्रिविधं तु निमित्तमेषां असात्म्येन्द्रियार्थ संयोगः प्रज्ञापराधः परिणामश्च।

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Three kinds of aetiology are common to all diseases: one cause among them, is the incompatible association of the senses and the sense objectives, (while,) the intentional violation (of health habits) and the effects (of various specific causes, such as a physiological reason, e.g. as in agnimandya) are the other two. Cs.vi. 1.3

येनाहारविहारेण रोगाणामुद्भवो भवेत्। क्षयोवृद्धिश्च दोषाणां निदानं हि तदुच्यते।।

Aetiology is called that by which (type of) food or pastime there will come about an occurence of diseases and a decline or thriving forth (*as the case may be i.e. when the former two are improper or proper*) of the morbidities or the vitiations. Vangasena.

त्रिविधंतु निमित्तमेषां असात्म्येन्द्रियार्थ संयोगः प्रज्ञापराधः परिणामश्च ते पुनः प्रत्येकमति योगाऽयोग मिथ्या योग भेदास्त्रिविधा भिद्यन्ते।

There are three instrumental or efficient causes (opposite to upadana or operative or material causes) for these (diseases): uncompatible association of senses and their objectives (i.e. unhealthy employment of sensory faculties), volitional offences (as regards the rules of health) and the effect (due to various internal and external factors). These get further divided threefold by the differences such as over, false or non-association. A. samg. su. 22

प्रधानमेव रोगाऽन्यस्य हेतुर्भवति यथा ज्वरो रक्त पित्तस्य रक्तपित्तं वा ज्वरस्य तौ श्वासस्य प्लीहा जठरस्य तत् श्वयथोः अर्शांसि गुल्मोदरातीसार ग्रहणीनाम्। प्रतिश्यायः कासज्वरयोः। तौ क्षयश्च। क्षयः शोषस्य।

A primary disease may become the cause of another disease, as a fever, for plethora, or plethora for fever, or both, for breathing difficulties; splenic enlargement, for a stomach disease, or the same, for an oedema; piles, for splenic enlargement, stomach trouble, dysentry or colic; or running of the nose, for dyspnea and fever, or consumption, for desiccation. A samg. 22

सप्तविधत्वम्-सहगर्भ जात पीडाकाल प्रभाव स्वभावजाः सप्त विधा रोगाः। तत्र सहजाः शुक्रार्तव दोषान्वयाः कुष्ठार्शो मेहादयः पितृजाः मातृजाश्च गर्भजाः जनन्यपचारात्कौब्ज्य पांगुल्य पैङ्गल्य किला सादयोऽन्नरसजा दौहृदविमानजाश्च जातजाः स्वापचारात् संतर्पणजाः अपर्तपणजाश्च पीडा कृताः क्षत भंग प्रहार क्रोध शोक भयादयः शारीरा मानसाश्च कालजाः शीतादिकृता ज्वरादयो व्यापन्नजा असंरक्षणजाश्च। प्रभावजाः देव गुरु शाप अथर्वणादिकृता ज्वरादयः पिशाचादयश्च स्वभावजा क्षुत् पिपासा जरादयः अरक्षणजा अकालजाः।

They (viz. the diseases) are of seven kinds: congenital, parturitional, self-induced, torment-induced, time-induced, super-natural power induced and, natural. Congenital are due to the vitiations of the semen and the oestrum, like leprosy, piles, urinary troubles and the like; either paternal or maternal. Parturitional are due to the offences of the mother (at the labour time) - either due to the nutritive fluids of the mother or the measures of the wet-nurse. Self-induced are due to one's own offences: either due to impletive measures. Torment induced are: lesions, fractures, hit; anger, grief, fear and the like; either somatic or mental. Time-induced are due to cold and the like such as fever, etc., either, due to

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upsettings (in the climate, for example) or defencelessness. Super-natural power induced are: due to the curse of the gods or the preceptors or due to witchcraft, such as fever, etc. and goblins, etc. Natural, are hunger, thirst, age, etc. (which are) due to defencelessness or untimeliness. A samg. su. 22.

व्याधि क्षमत्वं व्याधि बल विरोधित्वं व्याध्युत्पाद प्रतिबन्धकत्वमिति तावत्।

Tolerance to disease is antagonism to the strength of the disease and resistance to the (very) production (i.e. origin) of the disease. Cakrapani datta.

न च सर्वाणि शरीराणि व्याधिक्षमत्वे समर्थानि भवन्ति। शरीराणि च अतिस्थूलान्यतिकृशान्यनिविष्ट मांस संशोणितास्थीनि दुर्बलान्यसात्म्याहारोपचितान्यल्पाहाराणिअल्प सत्वानि च भवन्ति अव्याधि सहानिः विपरीतानि पुनर्व्याधिसहानि।

All the constitutions (lit. individual bodies) (of human beings) do not become capable of tolerance to disease. (Examples of) such constitutions are (those that are) very stout, very emaciated, or not (well) placed in flesh, blood and bones or the weak or have been nourished on non-homologous foods or are under - nourished or are weak in mind - these are all non-tolerant to disease. Contrary to these however are tolerant to disease.

शुक्रार्तवस्थैर्जन्मादौ विषेणेव विषी क्रिमेः।
तैश्च तिस्रः प्रकृतयो हीनमध्योत्तमाः पृथक्। समधातुः समरतासु श्रेष्ठा निन्द्या द्विदोषजाः।।

Like the poison germs (getting born) in the poison itself, three types of constitution (arise) separately along with the beginning of birth by the (factors of vata, pitta and kapha) that are situated in the sperm and the oestrum: (namely) deficient, medium and excellent. (A constitution) of equable constituents is the best among all; what is due to two dosas is despicable. Ahr. su. 1.9,10.

34. समवातपित्त श्लेष्माणं ह्यरोगमिच्छन्ति भिषजः, यतः प्रकृतिश्च आरोग्यम्, आरोग्यार्था च भेषज प्रवृत्तिः सा चेष्टरूपा तस्मात् सन्ति समवातपित्त श्लेष्माणः।

Physicians desire (such a person) who is having equibalanced (factors of) *vāta, pitta* and *śleṣma* (and is therefore) healthy and disease free. It is because the natural state is health, the (whole) enagement of a physician is meant to secure a disease-free state, and it is the securement of this state which constitutes all of their activites; therefore, there do exist (as commendable and the desired goal), the constitutions that are equiblanced regarding their *vāta, pitta* and *śleṣma* Cs. vi. 6.13.

molecular basis of structural organisation?

जातौ जातौ खलु स्वभाव एव आकृति भेदनिवर्तयिता भवति। स्वभावतो ह्यस्य वायु परमाणवः संयोग विभागचेष्टाधिकारा आकुंचन प्रसारण कोष्ठांग प्रत्यंग धातु चेतनास्रोतांसि विभाजन्त।।

In each and every individual that is born, it is his (innate) nature that becomes responsible to differentiate his specific morphological outline. It is by his nature

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(itself), the molecules of the *vayu* being responsible for combination, division and (all other) activities differentiate the (structures for) contraction, expansion, the viscera, individual organs and their sub structures, the body constituents, the (very) animatedness and the channels of transport. Ks. sa. jātisūtriya. 3.

शरीरावयवास्तु परमाणु भेदेनापरिसंख्येया भवन्ति अतिबहुत्वादतिसौक्ष्म्यादंतीन्द्रियत्वाच्च। तेषां संयोगविभागे परमाणूनां कारणं वायुः कर्म स्वभावश्च।

The constituent members of the body become uncountable in terms of the diversity of their molecules, because of the latters' excessive multiplicity, excessive minuteness and excessive suprasensability. The reason for combination and division among these molecules is the (factor of) *vāyu* and the (innate) nature of the activities concerned. Cs. sa. 7.17.

specific diseases of dosas

तत्र विकाराः - सामान्यजाः नानात्मजाश्च। नानात्मजांस्तु इहाध्यायेऽनुव्याख्या स्यामः, तद्यथा - अशीतिर्वातविकाराः चत्वारिंशत् पित्त विकाराः विंशति श्लेष्मविकाराः।

The disorders therein (of *vāta, pitta* and *kapha*) are: general and specific (lit. multigenic) ... We shall comment upon the specifics in this chapter; such as (i.e. these are:) - 80 *vāta* disorders, 40 *pitta* disorders and twenty *kapha* disorders. Cs. su. 20.10.

तत्र आदौ वातविकाराननु व्याख्यास्यामः।

Therein we shall first comment upon the *vāta* disorders.

(All the eighty diseases are then named very meaningfully; correlating them with the present day equivalents in neurogenic or neurohumoral diseases will be a rewarding exercise. A similar account exists for *pitta* and *kapha* diseases also. We however omit this, as well as the therapeutic measures indicated. We confine ourselves to merely the differential diagnostic features provided for these three cardinal categories of disorders, - some or many of them presumably present in the individual disease of that category)

सर्वेष्वपि खल्वेतेषु वात विकारेषु उक्तेष्वन्येषु चानुक्तेषु वायोरिदमात्म रूपमपरिणामि कर्मणश्च स्वलक्षणं यदुपलभ्य तदवयवं वा विमुक्त संदेहाः वातविकारमेव अध्यवस्यन्ति कुशलाः।

In all of these *vāta* disorders mentioned and yet others, that are unmentioned, experts ascertain it to be of *vāta* disorder only, without any doubt (whatsover), whenever the following characteristics or any (significant) limb thereof are obtained which constitute unchanging and innate characteristics of *vāyu*.° (*This statement recurs for the disorders of pitta and kapha, and is hence omitted; the respective diagnostic features for every one of these three categories are as follows*:)

रौक्ष्यं शैत्यं लाघवं वैशद्यं गतिरमूर्तत्वमनवस्थितत्वं चेति वायोरात्मरूपाणिः एवं विधत्वाच्च वायोः कर्मणः स्वलक्षणमिदमस्य भवति तं तं शरीरावयमाविशतः;

तद्यथा -

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संस भ्रंश व्यासंग भेद साद हर्ष तर्ष कम्प वर्त चाल तोद व्यथा चेष्टादीनि, तथा खरपरुषविशद सुषिरारुणवर्ण कषाय विरसमुखत्व शोष शूल सुप्ति संकोचनस्तम्भनखंजतादीनि च वायोः कर्माणि, तैरन्वितं वात विकारमेव अध्यवस्येत्।

(i) *Vāta diseases; diagnostic features* : Dryness, coldness, lightness, clarity, dynamism, amorphosity, unsettledness, – these are the innate features of *vāyu*. For the functionings of the *vāyu* of this nature, the following constitute the innate (diagnosable) characteristics as it gets into the several individual organs of the body; such as; displacement, dislocation, expansion, constipation; rupture, sinking down, horripilation, thirst, tremor, ball formation (of the stools), motility, pricking pain, a pain of pressing down, gesticulation and the like. Similarly, being rough, harsh, clear, hollow; pinkish in colour, astringent (in action), tasteless in mouth, dry, prickly, benumbing, contractive, styptic, causative of lameness and the like are the activities of the *vāyu*. Whatever is accompanied with these features should be ascertained to be as of *vāta* disorder only.

ओष्ण्यं तैक्ष्ण्यं द्रवत्वमनतिस्नेहो वर्णश्च शुक्लारुणवर्जो गन्धश्च विस्रो रसौ च कटुकाम्लौ सरत्वं च पित्तस्यात्मरूपाणि, एवं विधत्वाच्च पित्तस्य कर्मणः स्वलक्षणमिदमस्य भवति तं तं शरीरावयवमाविशतः, तद्यथा-दाहौष्ण्य पाक स्वेद क्लेद कोथ कण्डू स्राव रागा यंथास्वं च गन्धवर्ण रसाभिनिर्वर्तनं पित्तस्य कर्माणि, तैरन्वितं पित्तविकारमेवाध्यवस्येत्।

(ii) *pitta diseases; diagnostic features* – Heat, acuteness, liquidity, not excessive stickiness, colourfulness; white or any colour other than pink; smelliness like that of flesh; *rasa* or taste being bitter and acidic; and laxity are the innate features of *pitta*. For the functionings of *pitta* of this nature, the following constitute the innate (diagnosable) characteristics as it gets into the several individual organs of the body; such as, a burning nature, heatedness, a sensation or feeling of being cooked, sweating, wetting, disintegration and decay, itching, discharge, colouredness and a bringing about of a smell, a colour and taste in accordance with the specifity of the *pitta* in whatever organ this morbid *pitta* gets lodged. – these are the activities of *pitta*. Whatever is accompanied with these features should be ascertained to be of *pitta* disorder only.

स्नेह शैत्य शौक्ल्यगौरव माधुर्य स्थैर्य पैच्छिल्यमत्स्न्यानि श्लेष्मण आत्मरूपाणि, एवं विधत्वाच्च श्लेष्मणः स्वलक्षणमिदमस्य भवति तं तं शरीरावयवमाविशतः, तद्यथा – श्वैत्य शैत्य कण्डू स्थैर्य गौरव स्नेह सुप्ति क्लेदोपदेह बन्धमाधुर्य चिरकारित्वानि श्लेष्मणः कर्माणि, तैरन्वितं श्लेष्मविकारमेव अध्यवस्येत्।

(iii) *kapha diseases; diagnostic features*.

Unctuousness, coldness, whiteness, heaviness, sweetness, steadiness, mucillaginousness, tenderness are the innate features of *śleṣma*. For the functionings of *śleṣma* of this nature, the following constitute the innate (dagnostic) characteristics as it gets into the several individual organs of the body; such as, whiteness, coldness, itching, steadiness, heaviness, unctuousness, benumbedness, wetness, besmeared-ness, binding, sweetness, and chronicity are the activities of *śleṣma*. Whatever is accompanied with these features should be ascertained to be of *śleṣma* disorder only. Cs. su. 20. 12-18.

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(उत्पत्तिहेतुः) व्यभिचारिदूर निकट प्राधानिकत्वात् चत्वारः। असात्मेन्द्रियार्थ संयोग परिणाम प्रज्ञापराधात् त्रिधा, रुग्दोषो भयकारणात् द्वौ द्वौ व्यंजकोत्पादकौ बाह्यांभ्यन्तर भेदात् च।

(*Aetiology of a disease is*) of four types: deviant, remote, proximal and primordial; three types, incompatible communion among the sense organs and the sense perceptions, (cumulative) effect and wilful transgression; two types, by the malady of the disease or, a reason of fright; two types, suggestive and generative; two types, external and internal. Ma. Madhu.

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13. Medicine

1. व्याधेस्तत्व परिज्ञानं वेदनायाश्च निग्रहः ।
एतद्भैद्यस्य वैद्यत्वं न वैद्यः प्रभुरायुषः ।।

Comprehension of the true nature of the disease and controlling of the pains (and the other distresses that arise thereby), -this is the physicianness of a physician. He is not the Lord of the span of the (patient's) life.-Bṛahma vaivarta-16

a. *medical examination - general guidelines*

2. अधिगततन्त्रेण उपासिततन्त्रार्थेन दृष्ट कर्मणा कृत योग्येन शास्त्रं निगदता राजानु ज्ञातेन नीचनखरोम्णा शुचिना शुक्ल वस्त्रपरिहितेन छत्रवता दण्ड हस्तेन सोपानत्केन अनुद्धतवेशेन सुमनसा कल्याणाभिव्याहारेण अकुहकेन बन्धुभूतेन भूतानां सुसहायवता वैद्येन विशिखाऽनुप्रवेष्टव्या।

A sick-room should be entered into (only) by such a physician who has fully grasped the technical treatise concerned and also closely follows the meanings (of the readings) thereof. He should have himself seen other physicians carrying out the (medical and the surgical) practices (he intends to use) and should have been rendered capable (to do so by proper education). He should be proclaiming about (for e.g., teaching, his) discipline and should possess the due certificate from the king (or *any other competent authority* for such a practice and teaching). He should have his hairs and nails pared (i.e., be trim), be clean, dressed in white and have an umbrella, a stick and sandals (i.e., *be comely and decent in get up*). He should be gracious and pleasant, and also be (activiely) speaking good and auspicious words (*and not just keep mum*). He should never be a cheat or a rougue, be friendly to all and also have the necessary assistance (to carry out his profession).

ततो दूत निमित्त शकुन मंगलानुलोम्येन आतुरगृहमभिगम्य उपविश्य आतुरं अभिपश्येत् स्पृशेत् पृच्छेत् चः
त्रिभिरेतैः विज्ञानोपायैः रोगाः प्रायशो वेदितव्या इत्येकेः तत्तु न सम्यक् षड्विधो हि रोगाणां विज्ञानोपायाः तद्यथा- पंचभिः श्रोत्रादिभिः प्रश्नेन चेति।

He should approach the patient's house after giving due considerations for the informant (who has called him), the motive and the ground (because of which he has been called), the omens (of the time) and the (then available) auspicious signs. (After getting in thus, mentally prepared adequately on such data) he should (then) sit down, look at the patient well, touch him and make the enquiries. Some consider that the diseases are to be properly diagnosed and understood by these three scientific devices (alone, for, these actually constitute a well trained (i) looking at, (ii) touching up and (iii) enquiring about, *the term used in the Text is vignānopayaih*, i.e., by such scientific devices). But this is not correct. The devices for ascertaining the diseases (on the contrary) are six (and not three): by means of (all the five sense not merely sight and touch) *plus* the oral enquiry (*e.g. conversation, questioning, circumlocution*).

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तत्र श्रोत्रेन्द्रियविज्ञेया विशेषा रोगेषु व्रणास्राव विज्ञानीयादिषु वक्ष्यन्ते- तत्र "सफेनं रक्तमीरयन् अनिलः सशब्दो निर्गच्छति (सू.अ. २६) इत्येवमादयः स्पर्शनेन्द्रियविज्ञेयाः शीतोष्ण श्लक्ष्णकर्कश मृदु कठिनत्वादयः (स्पर्श विशेषा) ज्वर शोफादिषु चक्षुरिन्द्रिय विज्ञेयाः शरीरोपचयापचयायुर्लक्षण बल वर्ण विकारादयः रसनेन्द्रिय विज्ञेयाः प्रमेहादिषु रसविशेषाः घ्राणेन्द्रिय विज्ञेया अरिष्ट लिंगादिषु व्रणानाम् अव्रणानाम् च गन्धविशेषाः प्रश्नेन च विजानीयात् देशं कालं जातिं सात्म्यम् आतंक समुत्पत्तिं वेदना समुच्छ्रायम् बलम् अन्तरग्निम् वात मूत्र पुरीषाणाम् प्रवृत्तिम् अप्रवृत्तिम् काल प्रकर्षादींश्च विशेषान्।

आत्मसदृशेषु विज्ञानाभ्युपायेषु तत्स्थानीयैः जानीयात्।

Therein: (i) among the diseases that can be specially ascertained by means of the *sense of hearing* we shall speak later, in (our context of) the disciplines of the discharge of the ulcers (*vraṇa srāva vignānīyādiṣu*). There (for instance we shall state that) 'wind (*vāyu*) gets out driving the blood along with froth and accompanied with a *sound*', and so forth. (ii) Examples of what can be ascertained by *touch* are: coldness, warmth, slipperiness, roughness, softness, hardness and stiffness and the like (of the body or its morbid region); (these become relevant in examining) fever and morbid swellings. (iii) What is ascertainable by the *organ of sight* is illustrated by (the examination involved in the observation of) the waxing of the body, estimation of the remaining span of life for the patient (for instance, on the criteria narrated in the Chapter in Sarirasthana) and (the ascertainment of the) abnormalities in his strength, colour and the like. (iv) The specialities of the taste of the urine in urinary diseases and the like illustrate (the diseases that can be ascertained by) the *organ of taste*. (v) The specialities of the odour in the wound and the non-wounds (viz, the morbid and the healthy regions and their comparison) found (useful) in (recognising) the (unfavourable prognosis of) *aristas* (physical omens on the patient's body foreboding death as in the chapter on *ariṣṭas*) and the like illustrate (what is deducible by) the *organ of smell*. (vi) By (oral) enquiry (from the patient), ascertain (a) the region (from where he comes), (b) the time (since when the complaint is occurring and the other details thereof for e.g., the intermittency or the steadiness, etc. of the ailment), (c) caste (to which he belongs), (d) compatibility (or the otherwise, of his body, for instance, with the foods or the drugs he is to be given now for treatment), (e) the full episode of his troubles, (f) the strength of digestion (he still possesses), (g) (the current) tendency or the otherwise for the evacuation of (his) bowels and urine, (h) the (particulars of) duration (chronicity, intermittency, immediacy, etc., of the complaint) and the like and the details thereof (on all of these eight accounts, i.e., *atoh*). These should be ascertained by the physician concerned by whatever (other, additional) scientific means (also) that are amicable to himself (and also from enquiries from) the persons that are of the places concerned (*for e.g. the bystanders in the case of an accident*).

एवमभिसमीक्ष्य साध्यान् साधयेत् याप्यान् यापयेत् असाध्यान् नैव उपक्रमेत परिसंवत्सरोत्थितांश्च विकारान् प्रायशो वर्जयेत्।

Examining this way by all (the necessary) means, (take steps to) (i) remove out the eradicable (diseases), (ii) control the mitigatable and (iii) do not commence any treatment at all for the impossible. The abnormalities that have persisted for more than a year should be probably left out (i.e., as incurable).

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भवति च अत्र -
मिथ्यादृष्टा विकारा हि दुराख्यातास्तथैव च।
तथा दुष्परिमृष्टाश्च मोहयेयुः चिकित्सकम्।।

There is a saying here: the abnormalities that are seen wrongly (by the physician himself) or told about wrongly (by the patient or his informants to the physician) or enquired about wrongly (by the physician himself) - (all of these) are likely to confuse the physician (during the course of his treatment. He should therefore take care to avoid the sources of error possible on all of these three considerations).

तत्र साध्या अपि व्याधयः प्रायेण एषां दुश्चिकित्स्यतमा भवन्ति तद्यथा - श्रोत्रिय नृपति स्त्री बाल वृद्ध भीरु राजसेवक कितव दुर्बल वैद्यविदग्ध व्याधिगोपक दरिद्र कृपण क्रोधनानाम् अनात्मवतानाम् अनाथानाम् चः एवं निरुप्य चिकित्सां कुर्वन् धर्मार्थकामयशांसि प्राप्नोति।

Therein, even if a disease is eradicable, it becomes very difficult to be treated for the following categories of patients: an orthodox brahmin, a king, an woman, a child, an old man, a timid person, a king's servant, a gambler, a weakling, a patient who has been treated by too many physicians or too excessively, a person who hides his disease, a poor fellow, a miser, an angry person, one who does not believe in himself (i.e., one who has no control over himself, viz., is unrestrained) or a person who has none to care for him. The physician who reflects on all of these counts and then (only) takes up the course of the treatment (he finds proper), he (alone) will secure religious merit (*dharma*), money (*artha*), his personal desires (*kāma*) as well as fame.

भवति च अत्र
स्त्रीभिः सहास्यां संवासं परिहासं च वर्जयेत्।
दत्तं च ताभ्यो नादेयम् अन्नादन्यदभिः भिषग्वरैः।

There is a precaution here (when dealing with a woman patient). Thy physician should give up making mirth along with her, staying with her or making fun of her. A good physician should not accept anything given by her, excepting food. Ss. su. 10.3-9.

3. त एते स्वभावत एव दोषाणां संचय प्रकोप प्रशम प्रतीकार हेतवः प्रयोजनवन्त श्च।

All of these (four kinds of) 'materials' (viz., plant, animal, mineral and climatic, employed as drugs) act on the patient by their own individual nature, as (specific) factors for (i) accumulation, (ii) aggravation, (iii) palliation or (iv) antagonism (*the four great physiological actions of clinical significance, if one would put this in modern parlance*) for the (several) vitations of the body and are thus useful (to be noted by the physician and dealt with, accordingly). Ss. su. 1.34.

4. शारीराणां विकाराणामेष वर्गश्चतुर्विधः।
प्रकोपे प्रशमे चैव हेतु स्क्तश्चिकित्सकैः।।

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Physicians indeed speak of these four kinds of factors alone, as being (solely) responsible for aggravating or palliating all the changes and abnormalities of the body. Ss. su. 1.35.

5. आगन्तवस्तु ये रोगास्ते द्विधा निपतन्ति हि।
मनस्यन्ये शरीरेऽन्ये तेषां तु द्विविधा क्रिया।।
शरीर पतितानां तु शारीरवदुपक्रमः।
मानसानां तु शब्दादिरिष्टो वर्गः सुखावहः।।

The accidental diseases afflict the man in two ways, some on the body, others on the mind. For those that affect the body, pursue the treatment as you would in the case of any other bodily (i.e., organic) disease. For the mental afflictions, pleasant sound (for instance, soothing talk) and the like will bring comfort. Ss. su. 1.36,37.

6. एवमेतत् पुरुषो व्याधिरौषध क्रियाकाल इति चतुष्टयं समासेन व्याख्यातम्। तत्र पुरुषग्रहणात् तत्संभव द्रव्य समूहो भूतादि रुक्तः तदंग प्रत्यंग विकल्पाश्च त्वग् मांस अस्थि सिरा स्नायु प्रभृतयः;
व्याधिग्रहणात् वातपित्तकफ शोणित सन्निपात वैषम्य निमित्ताः सर्व एव व्याधयो व्याख्याताः;
औषधग्रहणात् द्रव्य रस गुण वीर्य विपाकानाम् आदेशः,
क्रियाग्रहणात् स्नेहादीनि च्छेद्यादीनि च कर्माणि व्याख्यातानिः
कालग्रहणात् सर्व क्रियाकालानाम् आदेशः।

This is how, we have set forth in brief, a tetrad of factors that are important for all the activities (that come within the purview) of medical treatment. They are (to recapitualte); (i) the individual human person, (ii) the disease, (iii) the drug and (iv) the time of therapy. By the individual human person, we actually imply the entire gamut of all the mateials that have gone into his coming into being and in addition, every organ as well as its parts and the varied alternatives in it, the skin, the flesh, the bone, the vessels, the tendons and the like. By disease, we comprehend all types of diseases that are caused by *vāta, pitta, kapha*, blood and (their) *sannipāta* (i.e., aggregation or permutation) and their incompatibilities. By drug, we signify the drug material, its taste (*rasa*), quality (*guṇa*), potency (*vīrya*) and post-assimilative effect (*vipāka*). By therapeutic act we mean the acts of applying the ointments or (carrying out) the surgical operations and the like. By time, we indicate all the factors of time (that we are to consider while administering therapy for instance, *intermittency* of the fever, etc., or the interval of medication and the like). Ss. su. 1. 28-38.

7. बीजं चिकित्सितस्य एतत् समासेन प्रकीर्तितम्।
सविंशमध्यायशतमस्य व्याख्या भविष्यति।।

This set (of the four factors, the individual human person. the disease, the drug material and the therapeutic time) is considered *the* seed for all practices of medication. We have stated them in brief here. We shall provide with the detailed commentary on them in one hundred and twenty chapters that ensue. sss. su. 1.39.

b. *principles of therapeusis or medicine*

(Living human body consists of two entities: the body and the indweller (correspondng to *ātman*, self or soul of the other authors but called as *śarīri* in SS)

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existing together in a state of coinherence (*samavāya*) and not combination. Ayurveda is concerned with *śarīra* or the body only, of the action-indulging-human-person (*karmapuruṣa*) though it does not deny the existence or the importance of the Indweller. This *śarīra* is what continuously undergoes decay and disintegration - life or *cetana* exists during this state of incessant flux itself. Apart from *śarīri*, the body consists of *manas* (mind), *indriyas* (sense organs - of action or knowing) and the rest of the body. It is to be very properly stressed that - Ayurveda considers mind to be but a part of the body, an organ like any other and is best utilised as such, subservient to the needs of *śarīri*, the Self The best need of this self is *adhyātma cintana* (contemplating on the true nature of the Self) and *kaivalya prāpti* (to attain the Ultimate and the Absolute). For this, it is necessary that one should conquer *indriyas* which is the first level of action and *manas* which is the next level of action and attain a state of *samādhi* (all-controlledness). This is of course the ideal. Very few individuals can follow this course of action. But there is no denial that for a *jitendriya* - one who has controlled his sense organs, disease itself is a rare phenomenon and even the patient who is an *ātmāvan* (one who knows that *ātma* is what is most important and the rest are all subserivent to it, *including the mind*) can be cured best. Modern medicine ignores this aspect of knolwedge and usually tends to make mind the most important factor in a man. Therefore, according to it, confirming to the needs of the mind, its whims and inclinations becomes the main business of a peson. This basic divergence between the two systems of thinking of man - Ayurvedic and the present day Science, is a very important factor which the philosopher of modern times should carefully evaluate and *utilise*.

Ayurveda recognises all of these principles and also evaluates them well. but its actual field of action is not this - as this comes under *bṛhmavidyā* - the *parā vidyā* - the greater knowledge. Its specific field on the contrary is: to treat the body of the *karmapuruṣa*, just as it is the business of the modern medicine to do. The agreement in this objective is complete between the two systems of thinking; hence only Ayurveda is relevant to modern medicine. Otherwise it would have been totally irrelevant.

How does Ayurveda proceed now? The Texts proclaim that this body of the *karma puruṣa* is made up of five primordial elements or *panca mahābhūtas* viz., *pṛthvi, āp, tejas, vāyu* and *ākāśa*, just as anything else in nature or *pṛakrti* is also made up of. It is only the presence of *puruṣa* the Indweller (or the Soul as many would like to state) that makes it different from the latter and alive. For *purusa* is superior to *pṛakrti*. But *puruṣa* is unchanging and eternal while it is *prakrti* that is ever subject to change. The charges are: evolution as well as involution. These five primordial elemens are traceable all over the body as well as in its different organs. The elements themselves have clear cut charactes which are well formulated. They exist not only when they make up a human body but anywhere else also for instance when they make up a drug or a diet. The drug or the diet by which the human person is sustained or treated, carries on its work solely because of these five components. They do so restoring that which has lost it optimum level in the body and balancing what needs to be balanced. There is nothing in this whole world of *pṛakrti* which does not contain one or more of these five elements. In fact usually all occur together. It is only their proportions that vary and it is on these that we classify a susbstance as predominantly *pṛthvi*, *āpya* etc. This statement applies to drug, diet as well as the body and its parts. There is no exception.

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Seven constituents (*dhātus*) are recognised in the human body, discrete and unmistakable. They are: *rasa* (assimilative essence of the food), *rakta* (blood), *māmsa* (flesh), *meda* (fat), *asthi* (bone), *majja* (bone marrow) and *śukra* (semen). This order also represents how they are formed in the body continuously. The source for all this is, the food consumed. This is first converted into *rasa* . From this arises *māmsa* and so on. Such a course of transmutation is continuous and constitues *cayana* or gathering, the technical term for the concept of metabolism. In fact, one can stipulate a time interval before which the food consumed is converted into semen, the final *dhātu* .

While living, the body can also be said to be actually made up of three entities: *doṣa, dhātu* and *mala* . In fact, apart from these three, no body exists. *Dhātus* are what we have just seen; they are seven, differing from one another but related mutually because all are actually progressive transmutations from food. in a healthy body (*svastha śarīra* - i.e., the body which stays in its natural state, meaning thereby that health is natural and normal while disease is unnatural and abnormal) all these three components: *doṣa, dhātu,* and *mala* exist in their optimal level. It is this deviation from the optimum which indicates a state of imbalance or disease and therfore requires a resetting or correction. Increase or decrease of the components is attended by clear-cut clinical manifestations that can guide the physician for proper restorative regimen.

Several examples for clearly similar situations can be given now biochemically. A typical case is of the disease states related to hormones, where it has been noted that an optimal concentration alone is what would constitute a condition of health. More than this level or less than it - both lead to clear cut disease states, for e.g., hyperthyroxis or thyrotoxicosis and mixoedema, respectively. So also, an optimal level of hydrochloric acid secretion in the stomach is essential for normal gastric function or proper *jaṭharāgni* . Overproduction causes peptic ulcer syndrome while under production causes achlorhydria/hypochlorhydria, a condition with defective gastric functioning (also a case of *mandāgni* or feeble digestive power leading to the formation of *āma viṣa* the unripe or improperly processed food mateial that would itself act as a poison).

During the activity of life, some factors become prominently visible specially when they reach a stage of abnormality. This is what is called vitiation or *doṣa* state. The stage itself is called the stage of vitiation because the body becomes vitiaed as a direct result of this deviation. The factor responsible is also called the *doṣa* . Three such factors have been discerned and clearly demarcated. They are *vāta, pitta* and *kapha* . During health also these factors exist; a body cannot occur without them - for they are the three operative principle comprehending all the activities of life. But they become prominently visible and manifested only when they reach a level of abnormality. That is why they are called as the vitiation or the *doṣa* itself. During such vitiation which may occur anywhere or everywhere in the body and which is the main cause for disease, the characteristics of these three factors are always traceable. Consequently, in every disease and even a wound or its discharge, one can have a classification into three kinds; *vata, pitta* and *kapha* and their several permutations which would make it very truly a *syndrome* or "running together of a complex of symptoms." In the sections on etiology a fourth pathogenic factor is often added, that, of blood, whose vitiation also leads to characteristic diseases. This however, is not something new. *Rakta* is a *dhātu* which can get vitiated by any of the three *doṣas* or their permutuations, like any other

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dhatu. It is likely that *rakta* as a pathogenic cause is added mainly for ease in clinical diagnosis. A pertinent question is: can any specific chemical be traced to be responsible for these vitiations. This is probably done the easiest in rakta.* Another form of the same question is: when an Ayurvedist considers a situation as a situation of *vāta*, etc., is it possible to find a chemical basis of these statements?*

But, wherether one succeeds or not in equating these factors (if a modernist would prefer to call them so) to individual chemicals or complexes of chemicals, everyone of them have been isolated by these thinkers as having a clearly discernible field of operation and features of recognition, specially when abnormal. Texts speak amply of all these features. These three are primordial: no principle other than these three have been found necessary to explain the features of the body, its physiology and pathology. In a living body, these *vāta, pitta* and *kapha* exist in a state of dynamic balance - a homoeostasis: this latter would be a state of health. When they deviate from this state, due to various reasons, they cause disease either in the whole of the body or in some regions - for e.g., a circumscribed *sopha* or morbid swelling which can also be clearly classified into four classes, viz., *vāta śopha, pitta śopha, kapha śopha* and *rakta śopha*. The imbalance may be due to (a) anyone of these four factors or (b) anyone or more combination of them and (c) in any order of the combination. These are the details of the pathology involved and the Texts are eloquent on how to assess them. One should base the diagnosis, description, pharmacology and therapeutics on these details. It is better that the course of treatment should follow the course of such deails of upsetting in terms of *vāta, pitta, kapha* and *rakta*. The cure secured is then only bound to be radical, complete and fully successful).

c. *clinical examination - more specifications*:

8. त्रिविधं खलु रोग विशेष विज्ञानं भवतिः तद्यथा-आप्तोपदेशः प्रत्यक्षम् अनुमानं चेति।

तत्र आप्तोपदेशो नाम आप्तवचनम्। आप्ता हि अवितर्क स्मृति विभाग विदो निष्प्रीत्युपज्ञापदर्शिनश्च तेषां एवं गुण योगाद्यद्वचनं तत् प्रमाणम्। अप्रमाणं पुनर्मत्तोन्मत्तमूर्ख रक्तदुष्टादुष्ट वचनमिति।

प्रत्यक्षं तु खलु तद्यत् स्वयमिन्द्रियैर्मनसा चोपलभ्यते। अनुमानं खलु तर्को युक्त्यपेक्षः।

Three indeed are the modes or ascertaining the specialities of a disease (*in any specific case*): the teachings of the trustworthy, direct observations and inference.

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*. This is so even in modern biochemistry. With blood as the basis, we can clearly furnish the various parameters as an indication of pathology or the disease process. An added advantage is clear biochemical examples can be given that are also analogous to the three disease states of *vāta, pitta* and *kapha*, as follows. One *vāta* disease (i.e., rheumatic complaints) is associatd with uric acid concentration. In *pitta*, the alteration is usually manifested as jaundice, where for instance the bilurubin concentration reaches to 40-50 milligram pr 100 millilitre as against the normal level of 0.2.-0.8 milligram. In one representative disease of *kapha*, viz., respiratory disorder, concentration of the serum proteins and some enzymes is the pathological parameter. The bilurubin example is very particularly suited as the changes caused by the disease of the liver are correlated with changes in the constituents of blood. But the exact nature and extent of the damage to liver can be studied only by biopsy which is not an easy procedure, unlike the estimation ot the blood bilurubin.

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Therein by teachings of the trustworthy, (we) mean, the words of those who (the physician can trust *for e.g. his teachers*). The trustworthy are those who have unequivocal knowledge, memory and discriminativeness and are able to observe neither with favour nor with malice. Their words because of their association with qualities of this type are (dependable and) authoritative; while, the words coming from the inebriated, the insane, the stupid, the interested (i.e. the passionate and therefore partial) and even the blemishless words of the wicked are all (undependable and) unauthoritative.

That is direct examination which is secured by one's own senses and the mind. Inference is reason working on a given premises. Ca. vi. 4/3,4, (1,2)4.

9. त्रिविधेन खलु अनेन ज्ञान समुदायेन पूर्वं परीक्ष्य रोगं सर्वथा सर्वमथोत्तरकालमध्यवसानं अदोषं भवति। न हि ज्ञानावयवेन कृत्स्ने ज्ञेये ज्ञानमुत्पद्यते।

त्रिविधेत्वस्मिन् ज्ञान समुदये पूर्वमाप्तोपदेशाज्ज्ञानं ततः प्रत्यक्षानुमानाभ्यां परीक्षोपपद्यते। किं हि अनुपदिष्टं पूर्वं यत्तत् प्रत्यक्षानुमानाभ्यां परीक्षमाणो विद्यात्। तस्मात् द्विविधा परीक्षा ज्ञानवतां प्रत्यक्षं अनुमानं च; त्रिविधा वा सहोपदेशेन।

It is indeed by examining a disease earlier and in all ways by the entire gamut of the knowledge of these three kinds, that the whole of whatever is done (by physician), becomes blameless; for, by a mere limb of knowledge, a knowing of the entirety of the knowable will not ensue. In this mass of the knowledge of three kinds, the knowledge one secures by the trustworthy is of the first stage; it is in its perspective that (all) the rest is secured by direct observation and inference. (For) if not informed at all earlier, what can one understand by examining by (*only*) direct observation or inference? Therefore, the examination by the knowledgeable is of two kinds, direct examination and inference; three kinds, if instruction (by the trustworthy) is included.

10. तत्रेदमुपदिशन्ति बुद्धिमन्तः - रोगमेकैकयेवं प्रकोपणमेवं योनिमेवमुत्थानमेवमात्मानं एवमधिष्ठानमेवं वेदनमेवं संस्थानमेवं शब्द स्पर्श रूप रसगन्धमेवं वृद्धि स्थानक्षय समन्वितं एवं उदर्कं एवं नामानं एवं योगं विद्यात्।

तस्मिन् इयं प्रतीकारार्था प्रवृत्तिरथवा निवृत्तिरिति उपदेशात् ज्ञायते।

Therein, the intelligent physicians instruct (*their students*) in this way (*viz., clearly specify the following details* :) each and every disease is to be known as having such and such *provoking factors*; such and such a *source* such and such an *onset*; and such and such a *location*; such and such a *pain*; such and such a *situation*; such and such a *sound*; a *touch*, a *colour*, a *taste* and an *odour*; such and such complications; such and such a stage of *aggravation, steady continuation* (i.e. a stabilisation plateau) and *abatement*; such and such a *result*; such and such a *name*; and such and such *concomitants*. It is by those (detailed instructions and confidential informations) one learns that this is the indulgence or this is the avoidance that one should adopt to counteract (a specific case given).

11. प्रत्यक्षतस्तु खलु रोगतत्वं बुभुत्सुः सर्वेन्द्रियैः सर्वानिन्द्रियार्थानातुर शरीरगतान् परीक्षेत, अन्यत्र रस ज्ञानात्; तद्यथा- अन्त्रकूजनं सन्धिस्फुटनम् अंगुलीपर्वणां च स्वरविशेषांश्च ये च अन्येऽपि केचिच्छरीरोपगताः शब्दाः स्युः तान् श्रोत्रेण परीक्षेत।

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(*Points to be ascertained by direct examination of the patient* :) Seeking to know the principle involved in a disease, by means of direct examination, (the physician) should examine by all of the senses, excluding taste, the entire field of the sensible data presented by the patient:s body. Thus, he should examine with the ear the *intestinal sounds* (of the patient, by applying his ears to the patient's belly - *auscultation* ?); the *breaking* of the joints and the finger knuckless; the *variations* in the *voice* (of patient) and any other sounds that are there observabale in any part of the body. Ss. vi. 4.4-7.

इमे तु खल्वन्येऽप्येवमेव भूयोऽनुमानज्ञेया भवन्ति भावाः। तद्यथा-अग्निं जरण शक्त्या परीक्षेत बलं व्यायाम शकत्या श्रोत्रादीनि शब्दाद्यर्थग्रहणेन मनोऽर्थाव्यभिचारणेन विज्ञानं व्यवसायेन रजः संगेन मोहमविज्ञानेन क्रोधमभिद्रोहेण शोकं दैन्येन हर्षमामोदेन प्रीतिं तोषेण भयं विषादेन धैर्यमविषादेन वीर्यमुत्थानेन अवस्थानमविभ्रमेण श्रद्धामभिप्रायेण मेधां ग्रहणेन संज्ञां नाम ग्रहणेन स्मृतिं स्मरणेन ह्रियमपत्रपेण शीलमनुशीलनेन द्वेषं प्रतिषेधेन उपधिम् अनुबन्धेन धृतिमलौल्येन वश्यतां विधेयतया वयो भक्ति सात्म्य व्याधि समुत्थानानि कालदेशोपशयवेदना विशेषेण गूढलिंग व्याधिमुपशयानुपशयाभ्यां दोष प्रमाण विशेषमपचारविशेषेण आयुषः क्षयमरिष्टैः उपस्थित श्रेयस्त्वं कल्याणाभिनिवेशेन अमलं सत्वमविकारेण ग्रहण्यास्तु मृदुदारुणत्वं स्वप्नदर्शनं अभिप्रायं द्विष्टेष्टसुखदुःखानि च आतुर परिप्रश्नेनैव विद्यादिति।

The following are the other states that are ascertainable by inference alone and in such manners as above; such as, the (power of the) patient's *digestive fire* is to be examined by ascertaining what he can actually digest; *strength*, by the ability to perform physical exercises; ears and the other sense organs, by their sensitivity to sound and the like; *mind*, by its perspicuity of comprehension; *knowledge of the science*, by the actual practice thereof; *passion*, by the strength of attachment; *infatuation*, by the lack of understanding; *anger*, by the actions of violence; *grief*, by despondency; *joy*, by exhilaration; *fear*, by dejection; *fortitude*, by lack of dejection; *vitality*, by being up and doing; *resoluteness*, by the absence of vacillation; *faith*, by the opinion (one advances); *intelligence*, by comprehension; the *wits*, by correct recognition of the names of the objects (shown); *memory*, by the power of recall; *modesty*, by bashfulness; *character*, by conduct; *hate*, by aversion; *cunningness*, by what follows subsequently; *firmness*, by non-vacillation; *docility*, by compliance; *age*, *predilection*, *homologation* and *etiological factor* by the stage of life, residence, homologator signs and the type of pain, respectively; *disease with latent symptoms*, by testing with therapeutic or (experimentally) provocative medication; the *degree* of *morbidity*, by the inensity of the provocative factors; the *imminence* of *death*, by the severity of the fatal prognostic signs, the *expectation of recovery* (i.e. good prognosis), by the wholesome inclinations; and the *clear mind*, by unperturbability. Concerning the *hard-bowelled* or the *soft* bowelled condition, the *dreams* seen, the *cravings* and the *opinions*, and *likes* and the *dislikes*, *happiness* and *unhappiness* - these are all to be understood only by an interrogation of the patient. Cs. vi. 4.8.

12. आप्ततश्च उपदेशेन प्रत्यक्षकरणेन च। अनुमानेन च व्याधीन् सम्यग् विद्यात् विचक्षणः।।
सर्वथा सर्वमालोच्य यथा संभवमर्थवित्। अथ अध्यवस्येत् तत्वे च कार्ये च तदनन्तरम्।।
काय तत्व विशेषज्ञः प्रतिपत्तौ न मुह्यति। अमूढः फलमाप्नोति यदमोह निमित्तजम्।।
ज्ञान बुद्धि प्रदीपेन यो नाविशति तत्ववित्। आतुरस्य अन्तरात्मानं न स रोगान् चिकित्सति।।

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The discerning physician should understand the diseases properly by the teachings of the trustworthy, by his own undertaking of direct examination and also by inference. Having thought over everything and in all ways and as far as possible. (he) should then determine first the principle (operating in the disease concerned) and then, the line of treatment (he should adopt). One who understands the principle of the disease and the line of treatment is never at a loss in appropriate appplication. Being unconfused, he reaps the reward which comes of clear understanding. The learned physician who is unable to win his way into the patient's heart by the light of his scientific understanding (*in such a manner, as above*) is not entitled to treat disease. Cs. vi. 4. 9-12.

13. इह खलु द्वौ पुरुषौ व्याधितरूपौ भवतः - गुरुव्याधितः लघुव्याधितश्च, तत्र गुरु व्याधित एकः सत्वबल शरीर संपदुपेतत्वाल्लघुव्याधित इव दृश्यते, लघु व्याधितोऽपरः सत्वादीनामधमत्वाद्गरु व्याधित इव दृश्यते। तयो रकुशलाः केवलं चक्षुषैव रूपं दृष्ट्वाऽध्यवस्यन्तो व्याधिगुरु लाघवे विप्रतिपद्यन्ते।

(*assessment of the degree of the affliction by examining the external form* :) Now, there are two forms seen in the afflicted person - afflicted with grave disease, and afflicted with mild diseases. Of these, some one though afflicted with a grave disease may appear as if he is suffering from a minor malady (only), being endowed with an excellence in mind, strength and body; while another person though afflicted with a minor malady may appear to be having a grave disease due to his inferiority in mind, strength and body. Incompetent (physicians) diagnosing such cases by investigating merely with their eyes are misled in the differentiation of the (*actual*) graveness or the mildness (of a disease). Cs. vi. 7. 3.

14. नहि ज्ञानावयवेन कृत्स्ने ज्ञेये विज्ञानमुत्पद्यते। विप्रतिपन्नास्तु खलु रोगज्ञाने उपक्रमयुक्ति ज्ञाने चापि विप्रतिपद्यन्ते। ते यदा गुरु व्याधितं लघु व्याधित रूपमासादयन्ति तदा तमल्पदोषं मत्वा संशोधनकाले अस्मै मृदु संशोधनं प्रयच्छन्तो भूय एवास्य दोषानुदीरयन्ति यदा तु लघुव्याधितं गुरुव्याधितरूपमासादयन्ति तदा तं महा दोषं मत्वा संशोधन कालेऽस्मै तीक्ष्णं प्रयच्छन्तो दोपानतिनिर्हृत्य शरीरमस्य क्षिण्वन्ति। एवमवयवेन ज्ञानस्य कृत्स्ने ज्ञेये ज्ञानमभिमन्यमानाः परिस्खलन्ति।

(The value of medical expertise:) For, the knowledge of the whole of the knowables will not come about by knowing merely a limb of it. When (thus) confused in the diagnosis of the (*gravity of the*) diseases they will get confused in devising the line of treatment (as well). When they presume a gravely diseased person as being but mildly diseased, and thus regarding him to be only mildly vitiated, they give him at the time of purificatory measure, only mild purifications, they would be actually aggravating the vitiation further. And, when they presume a mildly diseased patient as being gravely diseased, and thus considering it to be a case of grave vitiation, they give him at the time of purificatory measures, strong purifications, they would be actually taking out the vitiations and be emaciating the body. In this way, by presuming that they can have a knolwdge of the whole by a mere limb of it, they (actually) commit a blunder.

विदितवेदितव्यास्तु भिषजः सर्वं सर्वथा यथा संभवं परीक्ष्य परीक्ष्याध्यवस्यन्तो न क्वचिदपि विप्रतिपद्यन्ते यथेष्टमर्थमभिनिर्वर्तयन्ति चेति।

सत्वादीनां विकल्पेन व्याधिरूपमथातुरे। दृष्ट्वा विप्रतिपद्यन्ते बाला व्याधिबलाबले।।

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ते भेषजमयोगेन कुर्वन्त्यज्ञान मोहिताः । व्याधितानां विनाशाय क्लेशाय महतेऽपि वा ।।
प्राज्ञस्तु सर्वमाज्ञाय परीक्ष्यमिह सर्वथा । न स्खलन्ति प्रयोगेषु भेषजानां कदाचन ।।

On the contrary, the physicians that know all that is there to be known, and diagnose, examining whatever is there to be examined, the whole of it and in all ways and as far as possible will on no occasion be confused; and, they can achieve the result as they desire. Besides, the inept physicians, diagnosing by merly looking at the patient are mistaken in assessing the severity or the slightness of the diseases, For, they reckon without reference to alternatives to the state of the patient's mind and the like (which they cannot assay by just looking at). Being deluded by their (such) ignorance they administer the medicines wrongly, thus either killing the patient or bringing down a great affliction upon him. The wise (physicians) however, ascertaining in every way, everything that is to be examined, will never blunder in their (proper) line of treatment. Cr. vi. t. 4-7.

तस्मात् दोषौषधादीनि परीक्ष्य दश तत्वतः ।
कुर्यात् चिकित्सितं प्राज्ञो न योगैरेव केवलम् ।

points of clinical examination: The wise physician should therefore examine the phenomena of vitiation and the medicine (in a patient) in terms of (these) ten points of examination: (vitiation or) the morbidity, the medicines (to be given), place, time, (his) homologations, digestive strength, mental (poise), habits, age and strength and should then only give his treatment not by just proprietary medicine. Cs. ci. 30. 326. su. 12.67-68.

d. *medical treatment*

(*a general note*) (Modern Medicine presumes that for its every practice, there is a definite physiological basis. it is said to be a science in this sense. Ayurveda is also based on its own understanding of the human physiology. it does not also appear to be wrong at least in the basics or its physiology even as we understand it now. The modern votaries of Ayurveda would therefore like to state as follows: "Basic difference, if any between the old Ayurvedic and the more youthful Modern Medicine is comparable to the difference between the geneal or the *sāmānya* and the particular or the *viśeṣa*; generalisation and specialisation and synthesis and analysis" (Dwarkanath). This seems to be a correct assessment in most aspects of Ayurveda, e.g., physiology, pathology as well as thereapeutics. Besides, there appear to be some additional merits here, e.g., a more proper and synoptic generalisation, at times, as on somatotypes.

A modern scientist aims to talk of any physiological process he selects, in terms of specific chemical compounds and their molecular reactions. In fact, if he states that he understands it thoroughly - be it the mechanics of a muscle or the impulse transmission in a nerve - he means that he can specify the molecular steps of its events. His non-understanding also chiefly means that the molecular counterparts of the events are not clear. Respiration is probably the best understood process in this sense, for he can go up from the muscular mechanisms of breathing to the mitochondrial electrolytic exchange and ATP molecules. Corollarily the molecular basis of emotion and human personality is the least understood. All investigations are this way aimed at extending our knowledge from the gross (i.e., the muscular) to the minute (i.e., the molecular) level, though it is probably relevant to raise a

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doubt sometimes if it is not futile to probe to this extent always as some processes do not occur at all till a specific level of complexity is reached. For instance, is it not justifiable to presume that there is no point in searching if an amoeba also has an emotionality since the latter is probably possible only if a particular level of the compleixity of the central nervous system is reached and amoeba does not have it. Physiologically can we specify now at least the limits of justifiability for such phenomena ? This does not seem to be easy. Still, none can deny the real gain as well as the practical utility if one can extend our knowledge to the molecular level wherever it is possible and also justifiable. It is in such endeavours that science is registering ever progressive advance.

We do not have anything comparable to this level of the depth of study in Ayurveda. There was neither the technology nor the sophistication of the means for thinking and the manouverability that attends it. This however need not mean that its understanding of human physiology, pathology or therapeutics was unsound. This does not seem to have been so. The *dosic* considerations constitute the physiological basis of ayurvedic medicine which can very well stand modern scrutiny. It is not irrelevant to stress again here what modern ayurvedists have often attempted to make out, that, in many cases, what the present day science has registered is, to fill the particulars and details for the generalised statements made out, by these earlier masters of Ayurveda).

d. *utility or the futility of medicare*

15. शास्त्रं ज्योतिः प्रकाशार्थं दर्शनं बुद्धिरात्मनः । ताभ्यां भिषक् सुयुक्ताभ्यां चिकित्सन्नापराध्यति ।।

Technical treatises are like an effulgent light to illuminate (things). One's own intellect is the eye (with which one sees them). A physician treating the patients with these two employed properly will not commit a mistake. Cs. su. 124.

16. तद्भेषजं युक्ति युक्तम् अलं आरोग्याय इति भगवान् पुनर्वसुरात्रेयः ।

(The medical profession holds out that) the medicative measures employed in the proper way (as specified earlier) is enough for securing health - thus said the revered Punarvasu Atreya.

17. नैति मैत्रेयः किं कारणं। दृश्यन्ते हि आतुराः केचिदुपकरणवन्तश्च परिचारकसंपन्नाश्च आत्मवन्तश्च कुशलैश्च भिषग्भिः अनुष्ठिताः समुत्तिष्ठमानाः तथायुक्ताश्च अपरे म्रियमाणाः तस्मात् भेषजं अकिंचित्करं भवति। तद्यथा श्वभ्रे सरसि वा प्रसिक्तमल्पमुदकं नद्यांवा स्यन्दमानायां पांसुधाने वा पांसुमुष्टिः प्रकीर्ण इति। तथा अपरे दृश्यन्ते अनुपकरणाश्च अपरिचारकाश्च अनात्मवन्ताश्च अकुशलैश्च भिषग्भिः अनुष्ठिताः समुत्तिष्ठमानाः तथायुक्ता म्रियमाणाश्च अपरे। यतश्च प्रतिकुर्वन् म्रियते अप्रतिकुर्वन् सिध्यति अप्रतिकुर्वन् म्रियतेः ततश्चिन्त्यते भेषजं अभेषजेन अविशिष्टम् इति।

Maitreya said: "This is not so. Why? We can no doubt see that some (patients) who have the needed requirements and are endowed with a wealth of the nursing staff and are themselves courageous, and attended upon by clever physicians - they are getting up well from their sickness, while others similar to them in all ways are

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(however undoubtedly seen) to be dying. Therefore one should conclude that medicine does not simply do any thing. (And), that (i.e. this application of medicine) is like sprinkling a small quantity of water in a deep lake or shattering a handful of dust in a flowing river or a heap of dust (viz., it is simply of no consequence whatsoever). Similarly, we also see that other patients, who do not have any requirements, no nursing staff, are themselves not even courageous and are attended by inexpert physicians - these are actually getting up well from their sickness while others endowed similarly like them are clearly dying. Since patients die when counteracted, survive when not counteracted, die when not counteracted - we have perforce to conclude that medicare is in no way different from no medicare.

18. मैत्रेय मिथ्या चिन्त्यत इत्यात्रेयः। किं कारणां ये ह्यातुराः षोडशगुणसमुदितेन अनेन भेषजेन उपपाद्यमाना म्रियन्त इत्यक्तं तदनुपपन्नं। नहि भेषजसाध्यानां व्याधीनां भेषजं अकारणं भवतिः ये पुनरातुराः केवलात् भेषजादृते समुत्तिष्ठन्ते न तेषां संपूर्ण भेषजोपादनाय समुत्थान विशेषो नास्ति। यथा हि पतितं पुरुषं समर्थं उत्थानाय उत्थापयन् पुरुषो बलं अस्य उपादध्यात्, स क्षिप्रतरं अपरिक्लिष्ट एव उत्तिष्ठेत्। तद्वत् संपूर्ण भेषजोपलम्भादातुराः। ये च आतुराः केवलात् भेषजादपि म्रियन्ते न च सर्व एव ते भेषजेपपन्नाः समुत्तिष्ठेरन् न हि सर्वव्याधयो भवन्ति उपायसाध्याः न च उपायसाध्यानां व्याधीनां अनुपायेन सिद्धिरस्ति न च असाध्यानां व्याधीनां भेषजसमुदायोऽयमस्ति।

न हि अलं ज्ञानवान् भिषग् मुमूर्षुम् आतुरं उत्थापयितुम्।

परीक्ष्य कारिणो हि कुशला भवन्ति।

यथा हि योगज्ञो अभ्यासनित्य इष्वासो धनुगदाय इषुमस्यन् अतिविप्रकृष्टे महति काये नापराधवान् भवति संपादयति च इष्टकार्यं तथा भिषग् ग्वगुण संपन्न उपकरणवान् वीक्ष्य कर्मारंभमाणः साध्य रोगं अनपराधः संपादयति एवं आतुरमारोग्येण।

तस्मान्न भेषजं अभेषजेन अविशिष्टं भवति।

"Maitreya, you are thinking wrongly" said Atreya. "Why? What you said that the patients being treated with this medicine endowed well with the sixteen qualities die away - is not appropriate. Medicine will not become purposeless in those diseases that are curable by drugs. And in the cases of those patients who get up wholly without any medicines, there is (actually) no special necessity of treating them with the medicines of all the sixteen qualitis. (*They do not need them*). As a person who has fallen down though himself capable of getting up, will get up more quickly and with not much struggle even, if another person offers him additional strength - exactly this way is the effect of the complete complement of the medicare to the patients. All the diseases indeed are not curable by the medical devices, but it is also true that there is no success in the diseases curable by the medical devices, by a non-application of these devices. Similarly (even) this full complement of the medicare is not meant for the diseases that are incurable. A knowledgable physician alone is not enough to lift up a dying patient. It is only those who examine (every situation according to its merit) that become experts. An archer, fully conversant with his field and also practising daily when he takes up an arrow and shoots at a target that is not very far and also quite large in size will definitely not fail, and will secure his desired effect. Similarly, a physician richly endowed with his qualities and having the necessary requirements and starting his work with full consideration, will not make a mistake in a curable disease, and will thus secure the health for the patient. Therefore, we should not conculde that there is no speciality between giving medicare and not giving it". Cs. su. 10.3.5.

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19. इदं च नः प्रत्यक्षं यदनातुरेण भेषजेन आतुरं चिकित्सामः क्षामं अक्षामेण कृशं च दुर्बलं आप्याययामः स्थूलं मेदस्विनं अपतर्पयामः शीतेन उष्णाभिभूतं उपचरामः शीताभिभूतं उष्णेन न्यूनान् धातून् पूरयामः व्यतिरिक्तान् ह्रासयामः व्याधीन् मूलविपर्ययेण उपचरन्तः सम्यक् प्रकृतौ स्थापयामः । तेषां न स्तथा कुर्वतां अयं भेषज समुदायः कान्ततमो भवति ।

"Moreover, we actually see the following to be true (and verifiable by direct evidence): We all treat a patient with blemishless medicine, we nourish and gladden the emaciated and the weak, the feeble with the strengthening (measures). We slim away the stout and the fatty. We nurse the patient struck by heat with cold medications and the patient struck by cold with hot medications. We fill up the constituents, that are deficient, and reduce those that are the opposite (i.e. excessive). Treating the diseases from their very roots, we perfectly establish the patient in his stately health. This community of drugs which accomplish all of these effects become extremely pleasing (*therefore to us, the physicians*).

20. साध्यासाध्यविभागज्ञो ज्ञानपूर्वं चिकित्सकः । काले च आरभते कर्म यत्तत् साध्यति ध्रुवम् ।।
अर्थं विद्यायशो हानिं उपक्रोशं असंग्रहम् । प्राप्नुयान्नियतं वैद्यो योऽसाध्यं समुपाचरेत् ।।

A physician who commences a work, knowing fully well the distinction between the curable and the uncurable, with all the knowledge needed and in time - he will definitely succeed in his attempt. A physician who commences a treatment for an incurable disease will undoubtedly secure a loss of money, learning and fame; instead he will earn reproach and a loss of practice.

e. *medical treatment: preliminaries*

21. दोषावसेचनमन्यद्वा भेषजं प्राप्तकालमप्यातुरस्य नैवं विधस्य कुर्यात् । तद्यथा-अनपवाद प्रतीकास्य अधनस्यापरिचारकस्य वैद्यमानिनः चण्डस्य असूयकस्य तीव्रा धर्मारुचेः अति क्षीण बल मांस शोणितस्य असाध्य रोगोपहतस्य मुमूर्षु लिंगान्वितस्य चेति ।
एवं विधंहि आतुरमुपचरन् भिषक् पापीयसा अयशसा योग मृच्छतीति ।

(*whom not to treat*:) Neither the therapy of elimination of morbid matter nor any other kind of medication should be administered even when indicated and the proper time has (also) come up, to the patients of the following kinds; one who does not counteract when blamed (for an improper act he is alleged to have committed and thus does not justify himself, on being questioned and is therefore really blameworthy); one who does not have any wealth or attendants; one who fancies himself to be a physician; the fierce tempered, the envious; one who takes intense delight in unrighteoueness; one who has become excessively feeble in strength, flesh and blood; one who is inflicted with an incurable disease and one who presents fatal prognostic signs. By treating such a patient, the physician will incur a highly censurable ill-fame. Cs. vi. .45.

22. न च व्याधिमुपेक्षे शरीरं पतितं बुधः । त्वरेत शमने तस्य प्रदीप्तस्येव वेश्मनः ।।
यथा हि एकान्ततो वृक्षो वर्धति सुखतः शनैः । तथा शरीरमासाद्य रोगो वर्धत एव तु ।।
तस्माद्रक्षन् महावेगादक्षीणस्यैव देहिनः । प्रागेव उपचयात् रोगान् हन्याद् वैद्यो विचक्षणः ।।

(*a general caution*) The wise man should not neglect the disease that has affected (lit., fallen upon) the body. He should hurry up to quieten it down, as he

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would, when a house is burning. Just as a tree left alone prospers easily and slowly, so does the disease prosper having (once) made its entry into the body (if left unattended). Therefore, an expert physician should strike down the diseases before they start flourishing, protecting the patient (all the while) from the great ravages (of them) and before the patient's body becomes feeble. Bhela. Su. 4.27-29.

23. आतुरमुपक्रममाणेन भिषजाऽऽयुरादेव परीक्षितव्यं।
सत्यायुषि व्याधिरुत्वग्निवयो देह बल सत्व सात्म्य प्रकृति भेषज देशान् परीक्षेत।

(*a basic consideration*) The physician about to commence the treatment of a patient, should first examine the latter's (remaining) span of life; if this is still available,he should then examine his disease, the season prevalent (*as this determines the following four Da*.), his digestive strength, age, body and strength; his mental strength, homologation and constitution; the drugs (to be given to him) and the places (from where these drugs are procured). Ss. su. 35.3.

Background data (1) hints from the relative proportions of the body build

तत्र महापाणिपादपार्श्व पृष्ठ स्तनाग्र दशन वदन स्कन्ध ललाटं दीर्घाङ्गुलि पर्वोच्छ्वासप्रेक्षण बाहुं विस्तीर्ण भ्रूस्तनान्तरोरस्कं गम्भीरसत्वस्वरनाभिम् अनुच्चैर्बद्धस्तनम् उपचित महारोमशकर्ण पश्चान्मस्तिष्कं स्नातानुलिप्तं मूर्धानुपूर्व्या विशुष्यमाण शरीरं पश्चाच्च विशुष्यमाण हृदयं पुरुषं जानीयात् दीर्घायुः खल्वयमिति। तमेकान्तेन उपक्रमेत्। एभिर्लिक्षणैर्विपरीतैरल्पायुः, मिश्रैर्मध्यमायुरिति।

(how to recognise if the patient still has a span of life:) somatic signs of the span of life.

Hands, feet, sides, back, teats, teeth,face, shoulder, forehead - (all) great (in terms of the person's own finger lengths); fingers, joints in the fingers, breath, eye and arm, lengthened; eye-brows, distance between the breasts and the chest, wide and expansive; shank, penis and neck, all short; mental ability, voice and navel, deep; breast build-up, not very high; ears, well grown and with bristly hairs; skull, raising up backwards; with a body which after bathing or getting anointed (with an aroma) starts getting dried commencing from the head first and then, the cardiac region - such a person should be considered as being really long-lived. The physician should treat him intensively. He who has characteristics contrary to these is short lived; he who is mixed (in characteristics) is of the medium span of life. Ss. su. 35.4.

(extensive and meticulously detailed measurements of the body are given, interestingly, in terms of the inches- one inch being the distance between the two adjascent joints in the mid finger of the person concerned; therefore, the measurements can thus be straightaway transferred to assess the measurements in any person now).

(2) *hints from the over all nature of the person*

अथ सारान् वक्ष्यामः - स्मृति भक्ति प्रज्ञा शौच शौर्योपेतं कल्याणाभिनिवेशं सत्वसारं विद्यात्। स्निग्ध संहत श्वेतास्थिदन्त नखं बहुल कामप्रजं शुक्रेण अकृशमुत्तमबलम् स्निग्धगम्भीर स्वरं सौभाग्योपपन्नं महानेत्रं च मज्ज्ञा। महाशिरः स्कन्धं दृढदन्त हन्वस्थिनखमस्थिभिः स्निग्ध-मूत्र स्वेद स्वरं बृहच्छरीरं आयासा सहिष्णुं मेदसा अच्छिद्र गात्रं गूढास्थि सन्धिं मांसोपचितं च मांसेन स्निग्ध ताम्र नख नयन तालु जिह्वौष्ठ पाणिपादतलं रक्तेन सुप्रसन्न मृदुत्वक् रोमाणं त्वक् सारं विद्यादितिः एषां पूर्वं पूर्वं प्रधानम् आयुः सौभाग्ययोरिति।

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We shall now tell about the best or the essential parts of a man or his quintessences. One who is endowed with retentivity, devotion, wisdom, cleanlines and bravery as well as intention to (do what is) good and auspicious should be known as essentialy *śatvic* - or, the quintessence (of his nature) is, equanimity. He whose bones, teeth and nais are shiny (lit, viscid) and whose lust and offsprings, aplenty - (is to be known as being essentially rich) in (his) *semen* (He who is) not emaciated, excellent in strength; voice, friendly and deep and is endowed with prosperity and with great eyes (is rich) in his *marrow*. Head and shouders, great; teeth, jaw, bone and nails firm and durable (is rich) in his *bones*. Viscid in urine and sweat and friendly in voice; huge in body; tolerant to fatigue (is rich) in *fat* Body not broken (any where), bones and joints, concealed and well covered with flesh - (is rich) in *flesh*. Shiny with coppery nails, eyes, palate, tongue, lips, palm of the hands and the sole of the foot - (is rich) by *blood*. Very graceful, soft and hairy skin-(is rich) by excellence in *skin*. Among these, what is earlier is of greater value than what is later, as regards the span of life as well as general prosperity.

विशेषतोऽङ्गप्रत्यंग प्रमाणादथ सारतः ।
परीक्ष्य आयुः सुनिपुणो भिषक् सिध्यति कर्मसु ।।

By examining in terms of the detailed measurements of each and every organ as well as the quintessences concerned, the well skilled physician will succeed in his undertaking (the basic evaluations). Ss. su.35. 16,17.

तत्र सर्वाण्ये वौषधानि व्याध्यग्निपुरुषबलान्यभिसमीक्ष्य विदध्यात्। तत्र व्याधिबलादधिक मौपधमुपयुक्तं तमुपशम्य व्याधिमन्यमावहन्तिः अग्निबलादधिकमजीर्णं विष्टभ्य वा पच्यतेः पुरुप बलादधिकं ग्लानिमूर्च्छामिदानावहति संशमनमः एवं संशोधनमतिपातयति। हीनमेभ्यो दत्तभर्किंचित्करं भवति। तस्मात् सममेव विदध्यात्।

(3) *a general guideline* : Therein, all the drugs should be prescribed after fully considering the strength of the disease, the digestion and the patient. If the medicine is employed greater in strength than that of the disease, it will alleviate that particular disease but will bring in another disease (altogether); if greater than that of digestive capacity, it will get digested resulting either in indigestion or constipation; if greater than that of the person, the purificatory measures (employed) will bring in fatigue, fainting or intoxiation. In this way, the purification undertaken will over reach the objective. If it is given in a deficient measure (in respect of all these three) this will not do anything. Therefore what is absolutely equal (to the situation concerned) should only be prescribed. Ss. su. 40.10.

24. भेषजं नाम तत् यदुपकरणाय उपकल्प्यते भिपजो धातुसाम्याभिनिर्वृत्तौ प्रयतमानस्य विशेपतश्च उपायान्तेभ्यः ।

(*medicative action - a broad categorisation* :) Medication is that which is prepared by the physician as a means, as he is trying specially for restoring the body elements as the final aim.

तत् द्विविधं व्यपाश्रय भेदात्-दैव व्यपाश्रयं युक्ति व्यपाश्रयं चेति। तत्र दैव व्यपाश्रयं मन्त्रौपधिमणिमंगल बल्युपहार होम नियम प्रायश्चित्त उपवास स्वस्त्ययन प्रणिपात गमनादि। युक्तिव्यापाश्रयं संशोधनोप शमने चेष्टाश्च दृष्टफलाः ।

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This is of two kinds depending upon the difference in refuge or resort, namely - resort to gods or resort to specific devices. Resort to gods consists in incantations, herbal amulets, magical stones, auspicious sacrifices, offerings, oblations, vows, purificatory rituals, fastings, propitiatory invocations, salutations, pilgrimages and the like. Resort to devices consists in the activities of purification and pacification whose results have been already tested and observed.

एतत् चैव भेषजम् अंग भेदादपि द्विविधं-द्रव्यभूतम् अद्रव्य भूतं च।

This latter medication may again be divided into two based on its components: that which is material and that which is non-material.

तत्र यदद्रव्य भूतं तदुपायाभिप्लुतम्। उपायो नाम भय दर्शन विस्मापन विस्मारण क्षोभण हर्षण भर्त्सन वधबन्ध स्वप्न संवाहनादिरमूर्तो भावविशेषो यथोक्ताः सिद्धि उपायाश्च उपायाभिप्लुता इति।

The non-material is included under stratagem. And, the stratagem consists of frightening, causing surprise, obliterating memory, administering shock and inducing elation of spirits, threatening, violence, binding, inducing sleep, use of massage and such acts which are non-material and the other means (as well), as told and capable of achieving the desired end - all of these come under the name, strategy.

यत्तु द्रव्य भूतं तत् वमनादिषु योगमुपैति।
तस्यापि इयं परीक्षा-इदं एवं प्रकृत्येवं गुणमेवं प्रभावमस्मिन् देशे जातमस्मिन्नृतावेवं गृहीतमेवमुपस्कृतमनया च मात्रया युक्तमस्मिन् व्याधौ एवं विधस्य पुरुषस्यैव तावन्तं दोषं अपकर्षति उपशमयति वा,
यदन्यापि चैवं विधं भेषजं भवेत् तच्च अनेन विशेषेण युक्तमिति।

That which is a material for medication is what is included in emesis and the like. Of that, this is the test (that the physication should adopt:) it is of such a nature, such a quality, of such on efficacy, is born of such a country or region, of such a season, gathered in such a manner, preserved in such a way, medicated thus, and, in such dosage, administered in such a disease to such a person, and (it) either eliminates or allays such and such a vitiation. And, if there be administered any other mediciation of this type that also is accompanied with this (much detail of) speciality (of assessment). Cs. vi. 8.87.

25. भिषक् द्रव्याणि उपस्थाता रोगी पाद चतुष्टयम्।
गुणावत् कारणं ज्ञेयं विकार व्युप शान्तये।।

(*medical treatment (components)*). The physician, the drugs, the attendant (nurse) and the patient constitute the set of the four basics for treatment - this should be known as the cause of bringing about an allaying down of the diseases, if of the required qualities.

विकारो धातु वैषम्यं साम्यं प्रकृतिरुच्यते।
सुख संज्ञकमारोग्यं विकारो दुःखमेव च।।

Discordance of the body elements is the disease and their concordance, the original state (*prakṛti*) or health. Health is the sign of happiness, while disease is itself an unhappiness.

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चतुर्णां भिषगादीनां शस्तानां धातु वैकृते।
प्रवृत्तिर्धातु साम्यार्था चिकित्सेत्यभिधीयते।।

Therapeutics is the name given to the employment of the four factors (mentioned above) of the physician and the like, of commendable qualities, towards the (bringing about of a) concordance among the body-elements when they have become upset. Cs. su. 9.3-5.

श्रुते पर्यवदातत्वं बहुशो दृष्ट कर्मता। दाक्ष्यं शौचमिति ज्ञेयं वैद्ये गुण चतुष्टयम्।।
बहुता तत्र योग्यत्वं अनेक विधकल्पना। संपच्चेति चतुष्कोऽयं द्रव्याणांगुणः उच्यते।।
उपचारज्ञता दाक्ष्यं अनुरागश्च भर्तरि। शौचं चेति चतुष्कोऽयं गुणः परिचरे जने।।
स्मृतिर्निर्देशकारित्वं अभीरुत्वं अथापि च। ज्ञापकत्वं च रोगाणामातुरस्य गुणाः स्मृताः।।

Clear grasp of the theoretical knowledge (as existing in the Texts), wide practical experience (lit. the seeing of the other physician's work), skill and purity (of mind and body) - this is to be known as the set of four (desiderative) qualities in a physician. Plentiful availability, specific applicability (to the disease concerned), usability in multifarious modes (e.g. *as fresh extract, powders, decoctions, etc.*) and richness of quality - this is the set of the four desirable qualities in the drugs. Knowledge of service, skill, affection for the master (i.e. the patient) and cleanliness is the set of the four (desirable) qualities for the nursing attendant. Remembrance (of one's ailments and the doctors advice), obedience to instructions, non-timidity and the ability to describe one's own ailments - are considered to be the tetrad of the desiderata for the patients. Ca. su. 9. 6-9.

कारणं षोडशगुणं सिद्धै पाद चतुष्टयम्। विज्ञाता शासिता योक्ता प्रधानं भिषगत्र तु।।
पक्तौ हि कारणं पक्तुर्यथा पात्रेन्धनानलाः। वैद्यस्य अतश्चिकित्सायां प्रधान कारणं भिषक्।।
मृद् दण्ड चक्र सूत्राद्याः कुम्भकारादृते यथा। नावहन्ति गुणं वैद्यादृते पाद त्रयं तथा।।
गन्धर्वपुरवन्नाशं यद्विकाराः सुदारुणाः। यान्ति यच्चेतरे वृद्धिमाशूपाय प्रतीक्षिणः।।
सति पाद त्रये ज्ञात्रौ भिषजावत्र कारणम्।।

The set of the four basic factors endowed with the sixteen qualities (comprising of the four tetrads of the desiderata, in turn) is the cause for success in treatment. However, it is the physician who occupies the chief place (among these four) for he is the knower (of the disease), the instructor (of the attendant to the patient) and the prescriber (of medicine). As the utensils, the fuel and the fire are to a cook in cooking, or as the terrain, the army and the weapon - to a conquerer in securing the victory, so are the other three factors in relation to the physician. Hence is the physician the foremost factor in treatment. As the clay, the (shaping) rod, the wheel, the thread and the like are ineffective in the absence of the potter, so do the other three factors will not bring any success in the absence of the physician. If, when the other three factors are being given, very terrible diseases demanding attention and treatment are sometimes seen to vanish away like a city of illusion (*lit. city of the gāndharvas, a class of demi-gods*) and at other times get aggravated further, the cause is to be found in the physician who is wise in the former instance and ignorant in the latter. Ca. su. 9.10-15.

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26. वरमात्मा हुतोऽज्ञेन न चिकित्सा प्रवर्तिता।।

पाणि चारात् यथाऽचक्षुः अज्ञानात् भीत भीतवत्। नौर्मारुतवशेवाज्ञो भिषक् चरति कर्मसु यदृच्छया समापन्नमुत्तार्य नियतायुषम्। भिषड् मानी निहन्त्याशु शतान्यनियतायुषाम्।।

It is better for the ignorant quack to offer himself to fire than enforce his treatment on the patient. Like an eyeless man groping about with his hands in fearful uncertainty or like a (rudderless) canoe left adrift to the mercy of the winds, the ignorant physician proceeds in his work (full of uncertainty and fear). Emboldened by an accidental saving of a patient destined to survive (both the disease and his minstrations), the pretentious quack kills immediately hundred others whose tenure of life is not so definite. Ca. su. 9. 15-17.

तस्मात् शास्त्रेऽर्थविज्ञाने प्रवृत्तौ कर्मदर्शनि। भिषक् चतुष्टये युक्तः प्राणाभिसर उच्यते।।
हेतौ लिंगे प्रशमने रोगाणामपुनर्भवि। ज्ञानं चतुर्विधं यस्य स राजार्हो भिषक्तमः।।

Therefore the physician who is endowed with the four fold (accomplishment of) theoretical knowledge of the Texts, clear interpretation, actual employment and practical experience is being called as the reclaimer of life. He who has the four fold knowledge of etiology, symptamatology, therapeutics and prophylaxis of diseases, - he is the best among the physicians and deserves to be honoured by the king (or being a royal physician). Ca. su. 9.18, 19.

विद्यावितर्को विज्ञानं स्मृतिस्तत्परता क्रिया। यस्यैते षड्गुणास्तस्य न साध्यमतिवर्तते।।
विद्या मतिः कर्म दृष्टिरभ्यासः सिद्धिराश्रयः। वैद्य शब्दाभिनिष्पत्तौ अलं एकैकमप्यतः।।
यस्य तु एते गुणाः सर्वे सन्ति विद्यादयः शुभाः। स वैद्य शब्दं सद्भूतमर्हन् प्राणि सुख प्रदः।।
शास्त्रं ज्योतिः प्रकाशार्थं दर्शनं बुद्धिरात्मनः। ताभ्यां भिषक् सुयुक्ताभ्यां चिकित्सान्नापराध्यति।।
चिकित्सिते त्रयः पादा यस्माद्धैद्य व्यपाश्रयाः। तस्मात् प्रयत्नमातिष्ठेत् भिषक् गुण संपदि।।

Learning, ratiocination, comprehension, memory, promptness and action - for him who possesses these six qualities there is no curable disease that cannot be cured. Learning, intelligence, first hand knowledge of the work, practice, accomplishment and (expert) guidance: any single one out of these suffices to give its possessor the name of "physician". He who has all of these good qualities of learning and the like, he truly deserves the term "physician" (in its fullest sense) and he is the bestower of happiness to all. A treatise is(just) a light for elucidation (of the subejct). Vision and the insight are(due to) one's own intellect. The physician well endowed with both errs not in treatment. Since the other three factors in treatment are dependent on himself (for success), the physician should ever be taking effort to enrich excellence in his own good qualities. Cs. su. 9.21-25.

मैत्री कारुण्यमार्तेषु शक्ये प्रीतिरुपेक्षणम्।
प्रकृतिस्थेषु भूतेषु वैद्यवृत्ति श्चतुर्विधा।।

Friendship (towards all), compassion for the ailing, devotion to the curable patients and a sense of resignation towards the dying - of such four-fold nature is the profession of the physician. Cs. su. 9.26.

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27. अथ खलु त्रय उपस्तम्भाः त्रिविधं बलं त्रीणि आयतनानि त्रयो रोगाः त्रयो रोगमार्गाः त्रिविधा भिषजः त्रिविधमौषधमिति।

a list of threes: Now (in the body) there are indeed three subpillars; three kinds of strength, three receptacles (of disease); three diseases, three pathways for the disease; three kinds of diseases and three kinds of medicines.

त्रय उपस्तम्भा इति-आहारः स्वप्नो ब्रह्मचर्यमिति एभिस्त्रिभिर्युक्तियुक्तैः उपस्तब्धं उपस्तम्भैः शरीरं बलवर्णउपचयोपचितमनुवर्तते यावदायुः संस्कारात् संस्कारमहितम् अनुपसेवमानस्य य इहैव उपदेक्ष्यते।

The three sub-pillars are: food, sleep and continence, The body being sustained by the right use of these three sub-pillars grows in strength, complexion and (proper) development and endures for the full pre-ordained span of life provided that no indulgence in unwholesome practices such as pointed out in this treatise itself (elsewhere) is practised.

त्रिविधं बलमिति-
सहजं कालजं युक्तिकृतं च।
सहजं यच्छरीर सत्वयोः प्राकृतं कालकृतं ऋतुविभागजं वयः कृतं च,
युक्ति कृतं पुनस्तत् यदाहार चेष्टा योगजम्।

The three kinds of strength are: in-born, time-born and acquired by devices. In born is what is natural to the body and the mind. Time-born is what is due to the divisions of seasons and the age. Acquired-by-device is what is born by the association of food and activities.

त्रीणि आयतनानि-अर्थानां कर्मणः कालस्य च अतियोग मिथ्या योगाः।

The three receptables (of disease) are: over-use, disuse and misuse in relation to the sense objects, the activities and the season, (or the factor of time).

तत्र अतिप्रभावतां दृश्यानां अतिमात्रं दर्शनमतियोगः सर्वशोऽदर्शनमयोगः अतिश्लिष्ट अतिविप्रकृष्ट रौद्र भैरवाद्भुत द्विष्ट बीभत्सन विकृत वित्रासनादि रुप दर्शनं मिथ्या योगः।

Therein, seeing too much a sight that is excessively shinging is (an illustration of) over use, not seeing at all is disuse: seeing what is very close or what is too far, or what is in form awesome, terrible, stupendous, hateful, frightening, monstrous, tiresome and so on, is misuse. (similar specifications for all the senses are given, further on). Cs. su. 11.35-37.

त्रयो रोगा इति-निजागन्तुमानसाः। तत्र निजः शारीर दोष समुत्थः आगन्तुर्भूत विष वायु अग्निसंप्रहारादिसमुत्थः मानसः पुनरिष्टस्य लाभाल्लाभात् च अनिष्टस्य उपजायते।

The three disease are: endogenous, exogenous and mental. Therein, the endogenous is what comes up due to the vitiations of the body. The exogenous arises by the possession of evil spirit, poisons, fire, physical injuries and so on. The mental comes about from the gain or loss of the desirable and the undesirable (respectively).

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तत्र बुद्धिमतां मानसव्याधि परीतेनापि सता बुद्धया हिताहितमवेक्ष्यावेक्ष्य धर्मार्थकामानाम् अनुपसेवने हितानां च उपसेवने प्रयतितव्यं नह्यन्तरेण लोके त्रयमेतन्मानसं किंचित् निष्पद्यते सुखं वा दुःखं वा।
तस्मादेतच्चानुष्ठेयं-तद्विधानां च उपसेवने प्रयतितव्यम् आत्मदेश कुल काल बल शक्ति ज्ञाने यथावच्चेति।

Therein, the intelligent man even when he is afflicted with a mental disease, should, with right understanding, examine over and over again as to what is wholesome and what is unwholesome, and then should be taking effort not to resort to what is not conducive to *dharma*, economic prosperity and personal desire and to take up what is so conducive. For, apart from these three objectives (viz., *dharma, artha* and *kāma*) there is nothing in this world by which happiness or grief to the mind can result. Therefore one should practice the following - one should take effort to resort to the experts skilled in mental diseases and also strive to acquire the correct knowledge about one's own self, region, family, times, strength and ability.

मानसं प्रति भैषज्यं त्रिवर्गस्य अन्ववेक्षणम्।
तद्विद्यसेवा विज्ञानम् आत्मादीनां च सर्वशः।।

Contiinuous scrutiny of the three pursuits of life, resorting to those who are experts in alleviating the mental diseases, and an understanding of one's own self and the like in all ways, constitute the medication for the mental diseases. Cs. su. 11. 45-47.

त्रयो रोगमार्गा इति-शाखा मर्मास्थिसन्धयः कोष्टश्च। तत्र शाखा रक्तादयो धातवः त्वक् च स बाह्यो रोगमार्गः मर्माणि पुनर्बस्तिहृदय मूर्धादीनि अस्थिसन्धयोऽस्थिसंयोगाः तत्रोपनिबद्धाश्च स्नायुकण्डराः स मध्यमो रोगमार्गः कोष्ठः पुनरुच्यते महास्रोतः शरीरमध्यं महानिम्नं आमपक्काशय श्चेति पर्याय शब्दै स्तन्त्रे स रोगमार्ग आभ्यन्तरः।

The three pathways for (the spreading of the) disease (within the body) are: the peripheral ramifications, the vulnerable spots and the bone joints and the viscera. Therein, the ramifications are the body elements like blood and so on and the skin; this is the peripheral pathway in the body (for the spread of the diseases). The vulnerable spots are the bladder, the heart, the head and the like. The bone joints are the combinations of the bones and the sinews and the tendons adherent there; this is the middle pathway for the spread of the diseases. The viscera is the great channel in the middle of the body, the great hollow, otherwise called by the alternatives : the stomach and the intestine in the technical work. This is the internal pathway for the spread of the disease. Cs. su. 11. 48.

तत्र गण्ड पिडकालज्यपची चर्मकीलाधिमांस मषक कुष्टादयो विकारा बहिर्मार्गजाश्च विसर्पश्वयथुगुल्मा र्शोविद्रध्यादयः शाखानुसारिणो भवन्ति रोगाः।

Therein, goitre, pustules, pimples, scrofula, warts, granuloma, moles, dermic lesions, freckles and such other disorders as well as erysepelas, oedema, *gulma*, piles, abscesses and the like are the diseases of the external pathway and following the ramifications of the body. Cs. su. 11. 49(1).

त्रिविधा भिषज इति
भिषक् छद्मचराः सन्ति सन्त्येके सिद्ध साधिताः। सन्ति वैद्यगुणैर्युक्ताः त्रिविधा भिषजो भुवि।।

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The three types of physicians: some are impostors in the physician's garb, others are the vain-gloriuous pretenders and still others are endowed with the (real) qualities of a physician; (thus) there occur three kinds of physicians in this world. Cs. su. 11. 50.

वैद्य भाण्डौषधैः पुस्तैः पल्लवैरवलोकनैः ।
लभन्ते ये भिषक् शब्दं अज्ञास्ते प्रतिरूपकाः ।।

Those who by parading their medical paraphernalia of large vessels and drugs, models, smattering of medical texts and knowing looks acquire the title of physician, are the ignoramuses and the impostors. Cs. su. 11. 51.

श्रीयशोज्ञानसिद्धानां व्यपदेशादतद्विधाः ।
वैद्यशब्दं लभन्ते ये ज्ञेयास्ते सिद्धसाधिताः ।।

Those who by laying claim to association with (others) physicians of established wealth, fame, knowledge and success while they themselves have none of these, acquire the designation of the physician are the vain-glorious pretenders. Cs. su. 11. 5.

प्रयोगज्ञानविज्ञान सिद्धि सिद्धाः सुखप्रदाः ।
जीविताभिसरास्ते स्युर्वैद्यत्वं तेषु अवस्थितम् ।।

Those who are accomplished in application, theory, specialised other sciences, and actual success are the givers of happiness. They are the snatchers of life from death and the term physician (truly) stays with them. Cs. su. 11. 53.

त्रिविधमौषधमिति-दैवव्यापाश्रयं युक्ति व्यपाश्रयं सत्वावजयश्च। तत्र दैवव्यपाश्रयं-मंत्रौषधि मणि मंगल बल्युपहारहोम नियम प्रायश्चित्तोपवास स्वस्त्ययन प्रणिपातगमनादि।

The three kinds of drugs are: trust in God. trust in devices and mental control. Therein, the trust in God (is) - incantations, talismans, wearing of beads, propitiattory rites, sacrifices, offerings, oblations, vows, ceremonial penetances, fastings, auspicious rites, prostrations, pilgrimates and the like.

युक्ति व्यपाश्रयं-पुनराहारौषधद्रव्याणां योजना।

Trust in devices (is) - the devising of the suitable food and the drug materials.

सत्वावजयः-पुनरहितेभ्योऽर्थेभ्यो मनो निगहः ।

Mind control (is) - the restraining of the mind from the unwholesome objects. (S) Cs. su. 11.54.

28. प्राज्ञो रोगे समुत्पन्ने बाह्येनाभ्यन्तरेण वा। कर्मणा लभते शर्म शस्त्रोपक्रमणेन वा।।
बालस्तु खलु मोहाद्व प्रमादाद्व न बुद्ध्यते। उत्पद्यमानं प्रथमं रोगं शत्रुमिवाबुधः ।।
अणुर्हि प्रथमं भूत्वा रोगाः पश्चात् विवर्धते। स जात मूलो मुष्णाति बलमायुश्च दुर्मतेः ।।
न मूढो लभते संज्ञां तावद्यावन्न पीड्यते। पीडितस्तु मतिं पश्चात् कुरुते व्याधिनिग्रहे ।।

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अथ पुत्रांश्च दारांश्च ज्ञातींश्च आहूय भाषते। सर्वस्वेनापि मे कश्चित् भिषगानीयतामिति।।
तथा विधं च कः शक्तो दुर्बलं व्याधिपीडितम्। कृशं क्षीणेन्द्रियं दीनं परित्रातुम् गतायुषम्।।
स त्रातारमनासाद्य बालस्त्यजति जीवितम्। गोधालाङ्गूल बद्धेव आकृष्यमाणा बलीयसा।।
तस्मात् प्रागेव रोगेभ्यो रोगेषु तरुणेषु वा। भेषजैः प्रतिकुर्वीत य इच्छेत् सुखमात्मनः।।

A wise patient obtains relief immediately after a disease arises either by external or internal medications or the commencement of a surgical measure. But, the ignorant and the childish man will not notice either by stupidity or negligence, the disease as it starts arising in the first stage itself, just like a simpleton (who fails to recognise) a (potential) enemy. Being very minute at first, a disease grows enormously later on. When it becomes rooted firmly, it undermines the strength and the life of the witless man. The stupid man will not wake up (and recognise the seriousness of a disease) till he is tormented by it. It is only after he is (thus) tormented, he makes up his mind to get the disease under control. It is then that he sends for his sons, wives and kinsmen and tells them thus "Let a physician be brought even by (giving) the whole of my possessions". But which (physician) can protect a patient reduced to such a plight, grown weak, tormented by disease, emaciated with waning faculties and senses, given to despair and all but dead? Finding no saviour, this childish man abandons his life like an iguana that is laid hold of by its tail and is (relentlessly) being dragged out by a stronger creature. Therefore, one who desires one's own happiness, should counteract the diseases by medications before they ever show themselves or while they are yet in the incipient stage. cs. su. 11. 56. 63.

विपरीतगुणैर्देशमात्राकालोपपादितैः। भेषजैर्विनिवर्तन्ते विकाराः साध्यसंमताः।।
साधने न तु असाध्यानां व्याधीनां उपदिश्यते।

The diseases that are considered as curable disappear by the medicines applied carefully that are contrary to the qualities of the region (geographical and bodily), the dosage (in confirmity with the age, the strength, the digestive power, the compatibility etc.,) and the times (of the stage of the disease and of the seasons and the day or night). There is no teaching (done) for the curing of the incurable diseases. Cs. su. 1.62.

complexity and the value of knowing the measure of medical treatment

इहु खलु व्याधीनां निमित्त पूर्वरूप रूपोपशय संख्या प्राधान्य विधि विकल्प बल काल विशेषाननुप्रविश्य अनन्तरं दोष भेषज देशकालबल शरीरसाराहार सात्म्यसत्व प्रकृतिवयसां मानमवहित मनसा यथावत् ज्ञेयं भवति भिषजा दोषादिमानज्ञानायत्तत्वात् क्रियायाः। न ह्यमानज्ञो दोषादीनां भिषग् व्याधि निग्रह समर्थो भवति। (अथातो रस विमानं व्याख्यास्यामः। इति ह स्माह भगवानात्रेयः)।

Now, after having studied the characterisitcs of etiology, premonitory symptoms, signs and symptoms, homologation, number, predominent morbidity, the methodology (of treatment), pathological combination, strength and periodicity of the diseases, it should be the concern of the physician to understand with an undistracted mind, the accurate *measure* (in the case concerend) of the vitiations, the medications, the clime, the season, the strength, the constitutions, the vitality, the diet, the homologation, the psychic make up and the age., because, the lines of treatment

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depend upon the accurate recognitin of the measures of these vitiations and the like. A physician who does not know the measures of the vitiations and the like will not become capable to subdue a disease. That is why, in order to understand the measure of the vitiation and the like of the disease, Agnivesa we shall teach the chapter entitled Vimanasthana (the specific detemination of the measures). Ca. vi. 1.1,2,3.

f. *medical treatment - therapeusis*

29. कार्यं धातु साम्यं तस्य लक्षणं विकारोपशमः ।

The purpose of a therapeutic act is the restoring of the equilibrium of the body-elements. Its indication (i,e, that it has succeed in this purpose) is: the alleviation of morbid condition.

परीक्षा तु अस्य-रुगुपशमनं स्वरवर्णयोगः बल वृद्धिः शरीरोपचयः अभ्यवहार्याभिलाषः रुचिराहार काले अभ्यवहृतस्य चाहारस्य काले सम्यग्जरणं निद्रालाभो यथाकालं वैकारिकाणां च स्वप्नानामदर्शनं सुखेन च प्रतिबोधनं वातमूत्रपुरीष रेतसां मुक्तिः सर्वाकारैः मनो बुद्धिइन्द्रियाणां च अव्यापत्तरिति।

The test (to assess this success is); an alleviation of pain, a restoration of colour and voice (to normalcy), an appearance of plumpiness and nourishedness of the body, an increase in strength, a desire for food, a relish while eating, a timely and proper digestion of the food taken, getting sleep at the proper time, not seeing dreams as are caused by diseases, a happy awakening; elimination of flatus, urine, faeces and semen and a freedom from impairment of any kind in the mind, the intellect and the senses.

कार्यफलं सुखावाप्तिः; तस्य लक्षणं-मनोबुद्धीन्द्रिय शरीर तुष्टिः ।

The fruit of therapeusis is: attainment of happiness. Its charcteristics are - satisfactions of the mind, the intellect, the senses and the body. Cs. vi. 8. 89,90.

examination of the patient - a schedule to secure the required datamatics and the purpose

30. तत्र तावदियं आतुर परिज्ञान हेतोः । तद्यथा-अयं कस्मिन् भूमिदेशे जातः संवृद्धो व्याधितो वा; तस्मिंश्च भूमिदेशे मनुष्याणाम् इदमाहारजातं इदं विहारजातं इदं आचारजातम् एतावच्च बलं एवं विधं सत्वं एव विधं सात्मयम् एवं विधो दोषः भक्तिरियम् इमे व्याधयः हितमिदम् अहितमिदमिति प्रायोग्रहणेन।

औषध परिज्ञान हेतोस्तु कल्पेषु भूमि परीक्षा वक्ष्यते।

Now, here are the details for securing the full knowledge of the patient:

This is: In which country was he born,. grown up and attacked by the disease: (and, after ascertaining this, to enquire and find out that) in *that* country *this* is the diet of the people; *this* is their mode of sports and recreation, *this* is the custom and the habit, *this much* is their strength; *this type* is their proclivities; *this type* the homolgation; *this type* is the vitiation; *this* is their tastes; *there* are their diseases; *this* is wholesome for them and *this* unwholesome - these probably are (some of the details) that are to be ascertained (before the very commencement of medication). While dealing with Formularies, examination of the soil to understand drugs will be told.

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आतुरस्तु खलु कार्यदेशः। तस्य परीक्षा आयुषः प्रमाण ज्ञान हेतोर्वा स्यात् बल दोष प्रमाणज्ञान हेतोर्वा। तत्र तावदियं बल दोष प्रमाण ज्ञान हेतोः दोष प्रमाणानुरूपो हि भेषज प्रमाण विकल्पो बलप्रमाण विशेषापेक्षो भवति।

The patient is actually the field of action (for the physician). His examination is meant for knowing the meausre of his (remaining) life span, or the measure of his strength and morbidity. Therein, the reasons for ascertaining the measure of the strength and morbidity are these: the variation in the measures of medication is according to the measure of morbidity and is dependent upon the measure of the strength.

सहसा ह्यतिबलमौषधमपरीक्षक प्रयुक्तम् अल्पबलमातुरमतिपातयेत्।
न हि अति बलान्याग्नेय वायवीयान्यौषधान्यग्निक्षारशस्त्रकर्माणि वा शक्यन्ते अल्प बलैः सोढुम्: असह्यातितीक्ष्ण वेगत्वाद्धि तानि सद्यः प्राणहराणि स्युः।

For, a rash administration of a very strong medication, without examination in a weak patient, will upset him. Weak patients cannot stand strong remedies dominant in the quality of *agni* (fire) and *vāyu* (air) or the treatment by cauterisation, caustics and surgery. Since these latter are unendurable, very severe and rapidly acting, they are likely to be fatal immediately.

एतच्चैव कारणमपेक्षमाणा हीनबलमातुरमविषाद करैः मृदु सुकुमार प्रायैः उत्तरोत्तर गुरुभिः अविभ्रमैः अनात्ययिकैष्च उपचरन्ति औषधैः विशेषतश्च नारी ताहि अनवस्थित मृदु विवृत विक्लव हृदयाः प्रायः सुकुमार्योऽबलाः परसंस्तम्भ्याश्च।

It is because of this reason that in an emergency, a weak patient should first be treated with non-distressing, mild and generally delicate remedies and later on, gradually, by heavy remedies which do not upset him or give rise to complications. This (precaution) should be specially kept up in case of ladies, for, they are by nature unsteady, tender, wavering, easily disturbed and generally delicate, weak and dependent on others.

तथा बलवति बलवद्व्याधिपरिगते स्वल्पबलमौषधमपरीक्षकप्रयुक्तम् असाधकमेव भवति।

But in strong persons affected with a strong disease, weak medicines administered without examination (and assessment as above) become useless.

तस्मादातुरं परीक्षेत प्रकृतितश्च विकृतितश्च सारतश्च संहननतश्च प्रमाणतश्च सात्म्यतश्च सत्वतश्च आहार शक्तितश्च व्यायाम शक्तितश्च वयस्तश्चेति बल प्रमाण विशेष ग्रहण हेतोः।

Therefore the patient should be examined from the point of view of habitus, pathological conditions, tone of the system, compactness and build of the body, proportion, homologation, psychic condition, capacity for food, capacity for physical exercises and age, specially with a view to ascertain the degree of his strength. Cs. vi. 8. 89-84.

31. तस्मात् सत्यपि निर्देशे कुर्यादूह्य स्वयं धिया।
विना तर्केण या सिद्धिः यदृच्छा सिद्धिरेव सा।।

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(need for attentive logic) Therefore even if there is a direction (to a contrary measure) in the Text, (the physician) should carry out what is needed (to the case in hand) by reasoning it out with his own intellect; (for), what is achieved without a rational argument is a success of mere accident. Cs. si. 2.28.

वैद्यस्तर्क विहीनो नृपतिरदाता निरक्षरो मन्त्री। प्राघुणिकश्चिरवासी मस्तक शूलानि चत्वारि।।

A physican who is devoid of logical thinking, a king who does not give, an illiterate minister and a guest who stays too long-these are just head-aches.

अत्पमात्रं महावेगं बहु दोषहरं सुखम्। लघुपाकं सुखास्वादं प्रीणनं व्याधिनाशनम्।।
अविकारि च व्यापत्तौ नातिग्लानिकरं च यत्। गन्धवर्णरसोपेतं विद्यात् मात्रावदौषधम्।।

One should know *that* as a proportionately administered medicine which is small in amount, greatly quick (in action); removes many vitiations (together) with ease; light in assimilation; pleasantly tasty (and) gratifying to the mind; destroying the disease (for which it is administered but) not causing any ill effect (simultaneously); not causing excessive distress in case of any mishap in its use and endowed with fragrance, colour and the liquid essence (as required). Cs. si. 6.15,16.

32. विधूय मानसान् दोषान् कामादीन् शुभोदयान्
एकाग्र मनसा पीतं सम्यग् योगाय कल्पते।।

(*attitude of the patient*) If the medicament is consumed (lit. drunk) in all concentration and after cleansing the blemishes of mind like lust (anger and so on) which forebode the inauspicious - this (itself) will be conducive to render the drug perfectly suitable. Cs. si. 6.17.

33. अनुलोमोऽनिलः स्वास्थ्यं क्षुत् तृष्णोर्जो मनस्विता। लघुत्वमिन्द्रियोग्दार शुद्धिर्जीणौषधाकृतिः।।

(*signs of the proper assimilation of the drug*:) Passing of the gases in their natural directions; restoration of health, hunger, thirst, liveliness, cheerfuless and lightness, sharpness of the senses and (good) clean belching - these are the signs of the proper assimilation of the drug.

क्लमो दाहोअंगसदनं भ्रमो मूर्च्छा शिरोरुजा।
अरतिर्बल हानिश्च सावशेषौषधाकृतिः।।

(*not fully assimilated*:) Fatigue, a sense of burning, weakness of the limbs, giddiness, fainting, headache, disinterest and loss of strength - these are the signs that indicate that there is still a residuum of the drug (not yet assimilated).

अकालेऽल्पातिमात्रं च पुराणं न च भावितम्।
असम्यक् संस्कृतं चैव व्यापद्येतौषधं द्रुतुम्।।

(*miscarriage*:) Taken in a wrong time; in too small or too great a dose; (being itself) very old; not reinforced with other supportive medicines and prepared in an

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improper way - these will render the medicine to miscarry quickly and cause minor complications.

आध्मानं परिकर्तिश्च स्रावो हृद्गात्रयोर्ग्रहः । जीवादानं सविभ्रंशः स्तम्भः सोपद्रवः क्लमः ।
अयोगादतियोगाच्च दशैते व्यापदो मताः । प्रेष्य भैषज्य वैद्यानां वैगुण्यादातुरस्य च ।।

Inflation (puffing up with a gas inside); sharp, cutting pain esp. in the rectum; discharge; a seizure in the heart and the limbs; haemorrhage coupled with a laxity of the bowels; rigidity, stiffness or torpor; fatigue along with other minor distresses- these are the (ten) mishaps that arise due to non employment or over employment (of medicaments); they arise by the defects of the nursing staff, the drugs or the physician or of the patient. Cs. si. 6. 26-30.

34. आतुरावस्थास्वपि तु कार्याकार्यं प्रति कालाकाल संज्ञाः तद्यथा-अस्यामवस्थायां अस्य भेषजस्याकालः कालः पुनरन्यस्येतिः एतदपि भवति अवस्थाविशेषेण। तस्मात् आतुरै अवस्थास्वपि हि कालाकाल संज्ञा।

(*the value of timing* :) Even in the (different) stages of (the progress of) disease, there is a need to have a sense of timing viz, (as) to, what is timely and what is untimely, in accordance with what is to be done and what is not to be done. For instance, (one should always determine ahead) that in this (specific) stage (of the disease) this (particular) medicine is untimely but timely for the other. The same (precaution) holds good with the different stages of the disease.

तस्य परीक्षा -
मुहुर्मुहुरातुरस्य सर्वावस्थाविशेषावेक्षणं यथावत् भेषजप्रयोगार्थम्। न ह्यतिपतित कालमप्राप्त कालं वा भेषजमुपयुज्य मानं यौगिकं भवति। कालो हि भैषज्य प्रयोगपर्याप्तिमभिनिवर्तयति।।

A test for (securing) this (sense of timing)(once the process of medication has started) is: - (a carrying out of watchful) observation of the specialities of all the stages in the patient's (progress) again and again, in order to administer the medicine exactly as needed. For, the use of a medicine when the proper time has gone by or when it has not yet come, does not bear fruit. It is the opportune time that brings out the fruition of the administration of the medicine. Cs. vi. 8. 128.

प्रवृत्तिस्तु प्रतिकर्म समारम्भः ।
तस्य लक्षणं भिषगौषधातुरपरिचारकाणां क्रिया समायोगः ।

(*a definition* :) Treatment is the commencement of a counter-action. Its characteristic is a meeting together of the activities of the physician, the medicine, the patient and the nursing staff. Cs. vi. 8, 129.

Removal of the pathogenic factor (*samśodhana*) quitening the severity of the pathology (*samśamana*) and avoidance of the causative factors (as a prophylactic measure for the future (*nidāna pariv-rjana*) a these ought to be observed by a physician in each and every disease systematically, and as prescribed, Ca. su. 8. 30.

रोगमादौ परीक्षेत ततोऽनन्तरमौषधम्। ततः कर्म भिषक् पश्चात् ज्ञानपूर्वं समाचरेत्।।
यस्तु रोगमविज्ञाय कर्माण्यारभते भिषक्। अप्यौषधविधानज्ञस्तस्य सिद्धिर्यदृच्छया।।
यस्तु रोगविशेषज्ञः सर्व भैषज्य कोविदः। देशकाल प्रमाणज्ञः तस्य सिद्धिरसंशयम्।।

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First, the disease should be examined and then the drug or the line of the treatment (is to be decided). The physician should carry out his work only after these (two) are in the forefront of (all) his knowledge. The physician who however commences his work without knowing the disease, even though he may be the best therapeutist, his success depends purely on chance. But, for him-who knows the differential diagnosis of diseases, who is skilled in all types of therapeutics and who is well versed in the knowledge of clime, season and dosage - his success is undoubtable. Cs. su. 20. 20-22.

35. वायुः पित्तं कफश्चोक्तः शारीरो दोष संग्रहः। मानसः पुनरुद्दिष्टो रजश्च तम एव च।।
प्रशाम्यति औषधैः पूर्वो दैव युक्ति व्यापश्रयैः। मानसो ज्ञान विज्ञान धैर्यस्मृति समाधिभिः।।

(*some general principles* :) *Vāta, pitta* and *kapha* are said to constitute the entire collection of vitiations that cause the diseases of the body. And, of the diseases of the mind, there are only (two factors:) *raja* and *tama*. The former gets alleviated by medicines that have their basis in gods or specific devices; the latter, (gets alleviated, however) by knoweldge, expertise, courage, recollection and gathering together of (all the) mental capabilities. Cs. su. 1.57, 58.

रूक्षः शीतो लघुः सूक्ष्मश्चलोऽथ विशदः खरः। विपरीत गुणैर्दव्यैः मारुतः संप्रशाम्यति।।
सस्नेहमुष्णं तीक्ष्णं च द्रवमम्लं सरं कटु। विपरीत गुणैः पित्तं द्रव्यैराशु प्रशाम्यति।।
गुरुशीतमृदु स्निग्ध मधुर स्थिर पिच्छिलाः। श्लेष्मणः प्रशमं यान्ति विपरीत गुणैर्गुणाः।।
विपरीतगुणैर्देशमात्राकालोपपादितैः। भेषजैर्विनिवर्तन्ते विकाराः साध्यसंमताः।।
साधनं न तु असाध्यानां व्याधीनामुपदिश्यते।।

Vāta which is rough, cold, light, subtle, fickle, clear and harsh, gets quietened by qualities and materials that are contrary (to what have been enumerated above) *Pitta* which is slightly unctuous, hot, acute, liquid, acidic, spreading and bitter, gets quietened quickly by qualities and materials that are contrary. The qualities of *śleṣma* which is heavy, cold, soft, unctuous, sweet, steady and slimy get quietened by qualities and materials that are contrary. When medicines that are contrary to the diseases in terms of the regions (of geography of the patient or the body of the patient), dosage (that are given after due consideration of the factors of age, the strength, the compatibility etc.) and time (of the disease stage or of the climate or of the day) are given skilfully the curable diseases get cured. (We shall teach of these terms and the skills, later but) we do not teach any means to cure the uncurable; (for, there is not any). Cs. su. 1. 59-62.

36. सम्यक् शोधयतीति संशोधनः तत् द्विविधं-बहिराश्रयमभ्यन्तराश्रयं च। तत्र बहिराश्रयं शस्त्रक्षार-अग्नि प्रलेपादयः, अभ्यन्तराश्रयं चतुष्प्रकारं-वमनम् विरेचनम् आस्थापनं शोणित मोक्षणं च। दोषं शमयति तत् संशमनः यदुक्तं - "न शोधयति यद्दोषान् समान्नोदीरयत्यपि। समीकरोति कुद्रांश्च तत् संशमनमुच्यते" - इति। तदपि द्विविधं बाह्यमाभ्यन्तरं च। तत्र बाह्यमालेप परिषेकावगाह अभ्यंग शिरोबस्ति कवलग्रह गण्डूषादिकम्, आभ्यन्तरं तु पाचन लेखन बृंहण रसायन वाजीकरण विष प्रशमनादिकम्। आहारश्चतुर्विधः पेयलेह्याद्य, भक्ष्यभेदात्; स पुनस्त्रिविधः दोष प्रशमनो, व्याधि प्रशमनः, स्वस्थ वृत्तिकरश्चेति।... आचारः काय वाङ् मानसं कर्म।

(*a general statement*) (The treatment given) completely cleanses the diseases, hence this (i.e. such a measure) is a purification; this is of two kinds, extrinsically

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based and intrinsically based ; extrinsic are surgery, caustics, cautery, ointments and the like; the intrinsic, are of four types, emesis, purgation, enema and blood-letting - some however consider sternutation in place of blood-letting. Whatever (merely) quietens the morbidities due to what is drunk, licked and the like without removing them out completely (as in the measure for purification) is a (measure of) palliation. It is said: "that which does not cleanse a morbidity or does not excite an equilibrial state (of *doṣas* to morbidity) but equilibriates the provoked (vitiations) is stated to be a palliation". This is also of two kinds; extrinsic and intrinsic; therein, the extrinsic are ointment, sprinkling, submersion, bathing, sternutation, rinsing, gargling and the like, and the intrinsic are digestion, scarification, roborance, vitalisation, virilification, pacification of the poisons and the like. Food is of four kinds: drinks, electuals, eats and gulp(able)s; (medicatively) this is again of three kinds; pacifying the morbidity, pacifying the disease and health-giving.. Conduct is the activity of body, speech and mind. Da. ss. su. 1. 27.

37. अल्पमात्रं महावेगं बहु दोपहरं सुखम्।
लघुपाकं सुखास्वादं प्रीणनं व्याधिनाशनम्।।
अविकारि च व्यापत्तौ नातिग्लानिकरं च यत्।
गन्धवर्ण रसोपेतं विद्यान्मात्रावदौषधम्।।

(*medicine within (the requisite) measure* :) That medicine which even though small in quantity, is excellent and great in speed, destructive of many morbidities, comfortable in assimilability, comfortable in taste, conferring gracefulness, destructive of the disease (to which it is employed), causing only little disorders in case of any mishap, not causing much of a lassitude, endowed with commendable aroma, colour and liquid essence *that* is to be known as medicine (employed) within the requisite measure. Cs. si. 6.15, 16.

तथा बलवति बलवत् व्याध्यातुरे अल्पबलं अल्पं वा भेषजम् अकिंचित् करं भूय एव दोषमुत्क्लिश्य व्याधिमुदीरयेत्।

(*effect of using underdosed medicine* :) (Using) medicine which is not strong enough, or underdosed in patients who are strong or are having powerful disease is of no purpose (and, in fact), it will agitate the morbidity further and excite the disease. A samg. su. 23.7.

जातस्य शिशोः प्रथमे मासि रक्तिका प्रमाणौषधस्य मात्रा स्यात्। सा च मधुक्षीरसिता घृतैः सह अवलेह रूपेण देया। संवत्सरं यावन्मासादूर्ध्वं प्रतिमासमेकैका रक्तिका वर्धयतिव्या। वर्षादूर्ध्वं षोडशवर्ष पर्यन्तं प्रतिवर्षं माष प्रमाणेन वृद्धिः स्यात् मात्रायां।
आसप्ततेश्च सैवमात्रा स्यात्।
वार्धिक्ये क्रमेण मात्राया ह्रासः कर्तव्यः।

For the child just born, in the first month, the prescribed dosage of the medicine is of the proportion of a *raktikā* (a seed of *Abrus precatorius*); and, this is to be given in the form of an electuary (i.e. to be licked) along with honey, milk and white ghee. In the year after the first month it is to be increased by one *raktikā* every month. After the first year, till sixteen years the increase in dosage has to be

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in terms of *māṣa* (a seed of *Phaseolus radiatus*) for every year. This remains the same till seventy (years). In old age, dosage is to be reduced gradually. Da. Ss. su. 35.30.

एतानौषधकालांस्तु विभजेद्दाशधा दश। क्षीण धात्विन्द्रिये शान्ते क्लान्ते तान्ते बुभुक्षिते।।
भैषज्य दग्धकोष्टे च भेषजं नावचारयेत्। क्रुद्धे विषण्णे शोकार्ते रात्रौ जागरितो तथा।।
विदग्धाजीर्ण भक्ते च भेषजं नावचारयेत्। कर्माति भाराभिहते निस्नेहे सानुवासिते।।
उपोषिते विरिक्ते च भेषजं नावचारयेत्। यत्किंचिदप्युपात्तान्ने मूर्छिते घर्मतापिते।।
सद्यः पीतोदके चैव भेषजं नावचारयेत्।
अवस्थाविपरीतं च भेषजं नावचारयेत्।।

These ten types of the times of (giving) medicine are to be divided into ten types further. No administration of medicine should be done for a person whose body constituents and senses have become feeble; who is (completely) peaceful, languid and/or tense and hungry. Similarly, no medicine is to be given for a person whose viscera are (already) burnt out because of excessive (previous) medication; and similarly for him who is angry, dejected, afflicted with grief and who has kept himself awake in the night. No medicine is to be given for one whose previous food is completely digested out or for one who is having indigestion. No medication is to be given for one who is struck down by a heaviness of the burden of work; (and,) who has been administered oily or the non-oily enema; or who has fasted or has taken a purgative. No medicine is to be given for one who eats whatever food (one comes across) and who has swooned and who is troubled by sun and who has drunk water just previously. And, no medicine which is counteracting to the stage (of the progresss of) the disease, is to be administred. Ks. Khila. 3. 53-57.

38. (*employment of medicine in accordance with the disease:*)

सर्वेषामपि व्याधौ यथास्वं निदान विपरीतमौषधम् अवचारयेत्।

In all diseases whatsoever, a medicine contrastive to etiology is to be applied. A samg. su. 11. 48.

हेतु विपरीतेन औषधेन कृतेनाऽपि न शम्यति तथा सति त्वनुबन्धे निदान विपरीतमपास्य व्याधिविपरीतमेव तदर्थकारि वा।

If (the disease) does not mitigate, when there is an application of the etiology contrastive medicine, then, from then onwards, giving up the etiology contrastive, (one should apply) disease contrastive or anything of a similar effect. A. samg. su. 11.49.

यो दुर्बलोऽल्प दोषयुक्तः पूर्वं शोधितः कृशो यस्य कोष्टस्वरुपज्ञानं नास्ति तेन अल्पमात्रम् औषधं पेयम्। तथा तत्राल्पमात्रया सौम्यमौषधं वारंवारं पीतं सद्धितकरं भवति।

He who is weak, has little morbidity, already medicated with purificatory medicines, emaciated or whose conditions of the viscera are unknown, - only a small quantum of medicine is to be drunk by him. If he drinks a mild medicine in a small quantity but again and again, that will be salutary. A. samg. su. 27. 46-48.

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39. (आशु शुध्यर्थं प्रतिपक्षमौषधम्) यथा स्वलक्षणैः कर्मभिश्च बुद्ध्यापि दोषमवगमयेत्। तद्यथा- किमाहारेण कुपितो वायुः किं विहारेण तथा रूक्षेण लघुना शिशिरेण वा साहसेन वेगरोधेन वा भयेन शोकेन वा इति। ततश्च प्रतिपक्षमेव औषधं प्रयुज्यमानम् सिद्धये सम्पद्यते। तत्र मधुराम्ल लवणा रसाः कटु तिक्त कषायाश्चेतरेतर प्रतिपक्षाः।।

(antagonistic medicine for immediate purification:) (The physician) should come to understand the vitiation in accordance with the characteristic symptoms (concerned) or the activities or the specialities of the intellection, even. As for instance - whether the vayu vitiation (in this particular case) is provoked due to food, or by the (peculiar) pastimes (of the patient), or by (the use of) dry, light (foods, etc.) or by cold autumn or by adventurism, or by suppression of the natural urges or by fear or by grief. Then, if completely antagonistic medicines are used, he will attain success immediately. (a hint, of allopathy?). Therein sweet, acid and salt tastes are mutually antagonistic to bitter, pungent and astringent (tastes, respectively). A samg. su. 23.3.

पुनरपि त्रिविधम्-हेतु विपरीतं व्याधिविपरीतमुभयार्थकारि च। तत्र हेतु विपरीतं गुरु स्निग्ध शीतादिजे व्याधौ लघुरूक्षणोष्णादि तथेतरस्मिन् इतरत्। व्याधिविपरीतं द्वौ मूलोपक्रमौ तौ च स्नेह स्वेदौ लंघन बृंहणे पंचकर्माणि वमनादीनि सधूप धूमांजनादीनि च। तथा विम्लापन उपनाहन पाटनादीनि।

उभयार्थकारि पुनर्दैव व्यपाश्रयमौषधम्।

This is again of three kinds - cause contrastive, disease contrastive and both contrastive. Therein, cause contrastive is (the use in) diseases born of (the factors that are) heavy, unctuous, cold and the like, (of the agents that are) light, dry, hot and so on; similarly in other cases as well. Disease contrastive (measures) are two procedures. They are: oleation and sudation in lightening and roborant therapy and the *panca karmas* such as emesis and the like along with incense, fumigation and collirium; similar, are the softening, bandaging, splitting open and the like. Both contrastive is the medicine of taking resort to the gods. A samg. sa. 12.7.9.

40. मात्राया व्यवस्थानं नास्ति। देह दोषबल वयोदेशकालांश्च आलोच्य भैषजमवचारयेत्।

(*dosage*:) There is no firmness for the dosage. Medicine is to be applied after taking into consideration of the body, the vitiation, the strength, the age, the (geographical) region, and the (factor of) time. A samg. 8.

g. *specific curative measures*

41. अपतर्पणमपि च त्रिविधं -
लंघनं लघन पाचनं दोषावसेचनं चेति।

(*depletion*) Now, depletion is of three kinds: starvation, starvation cum (promoting) digestion and elimination of morbid matter.

तत्र लंघनं अल्पबल दोषाणां लंघनेन हि अग्निमारुत वृद्धया वातातप परीतमिव अल्पमुदकम् अल्पो दोषः प्रशोषमापद्यते।

Therein, starvation is indicated in disorders of light morbidity. By starvation, the little morbidity gets dried up completely, the gastric fire and the *vata* (peristalsis?) being stimulated, just as in a small quantity of water exposed to the sun and the wind.

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लंघन पाचने तु मध्यबल दोषाणां लंघन पाचनाभ्यां हि सूर्यसंताप मारुताभ्यां पांसुभस्मावकिरणैरिव च अनति बहूदकं मध्यबलो दोषः ।

Starvation cum digestion is indicated in disorders of moderate morbidity. By starvation cum digestion, the moderately strong morbidity gets dried up completely just as a sink of moderate quantity of water (does) when acted upon by the sun and the wind (on the one hand) and the falling in, of dust and ashes (silting it up,on the other hand).

बहु दोषाणां पुनर्दोषावसेचनमेव कार्यं नहि अभिन्ने केदारसेतौ पल्वलाप्रसेकोऽस्ति तद्वत् दोषावसेचनम् ।

Concerning the disorders of great morbidity, elimination of morbid matter is the only recourse. Just as there is no drying up of a (whole) tank (of water) without breaking the blocks in its outlet channels, similar is the need for a (whole) drainage of morbidity (in cases of excessive morbiditty). Cs. vi. 3.43, 44 (1,2).

ऊर्ध्व मारुत तृष्णाक्षुन्मुख शोष समन्वितैः ।
न कार्यं गर्भिणी वृद्धबाल दुर्बल भीरुभिः ।

(*to whom not advisable*) Depletion therapy is prohibited to those who are suffering from *ūrdhva vāta* (a disease where profuse belching occurs), the thirsty, the hungry; who have dryness at the mouth; the fatigued and the pregnant; the elderly, the child, and the timid. Ss. ci. 1.12.

संतर्पयति यः स्निग्धैर्मधुरैर्गुरुपिच्छिलैः । नवान्नैर्नवमद्यैश्च मांसैश्चानूपवारिजैः ।।
गोरसैर्गौडिकश्चान्नैः पौष्टिकैश्चातिमात्रशः । चेष्टाद्वेषी दिवास्वप्न शय्यासन सुखे रतः ।।
रोगास्तस्योपजायन्ते संतर्पणनिमित्तजाः । प्रमेह पिडकाकोठकण्डू पाण्डवामय ज्वरः ।।

(*impletion*) He who impletes (fills) himself with unctuous, sweet, heavy and viscous (food), recently harvested rice and recent liquor, flesh of wetland and aquatic animals, cow's milk and its products, articles of jaggery, or floury food in an excess quantity and who dislikes all (bodily) activities (and is) indulgent in day-sleep and cushiony seats - for him the following diseases arise caused by (such an) impletion: urinary disorders, pimples, pruritis, itching, (and) anaemic disease. Cs. su.23.3-5.

42. शीतेन उष्ण कृतान् रोगान् शमयन्ति भिषग्विदः । ये तु शीतकृता रोगास्तेषां उष्णं भिषग्जितम् ।।
एवमितरेषामपि व्याधीनां निदानविपरीतं भेषजं भवतिः यथा अपतर्पण निमित्तानां व्याधीनां नान्तरेणसा पूरणमस्ति शान्तिः तथा पूरण निमित्तानां व्याधीनां नान्तरेण अपतर्पणम् ।

(*allopathy*) The intelligent physician will allay the disorders caused by heat, by cold measures. Those diseases that are caused by cold, they are conquered by hot measures by the physicians. In this way, even with reference to all the other diseases, what is contrary to the causative, becomes the medicament; for instance, to the diseases caused by depletion, there is no quietening, excepting impletion. Similarly, for the diseases due to impletion, there is no remedy other than depletion. Cs. vi. 3.41-42.

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43. इत्युक्तमृतु सात्म्यम् यत् चेष्टाहार व्यपाश्रयम्।
उपशेते यदौचित्यादोकः सात्म्यं तदुच्यते।।

(*homologation*) Thus has been spoken about the homologation in consonance with the season (concerend, and) as dependent on the behaviour and the food (of the person in question). What lies in accordance with what is proper is the *ecos (oka)* or the proper habitus. It is this that is called homologoation or compatibility.

देशानामामयानां च विपरीतगुणं गुणैः।
सात्म्यमिच्छन्ति सात्म्यज्ञाः चेष्टितं चाद्यमेव च।।

Those who understand (the role of) homologation (in health and disease) desire (to secure) homologation by qualities that are contrary to the regions and the diseases in question. Cs. su. 6. 49. 50.

44. सर्वरोग विशेषज्ञः सर्वौषधविशारदः। भिषक् सर्वामयान् हन्ति न च मोहं निगच्छति।।

(*differential diagnosis*) The physician who is an expert in the differential diagnosis of all the diseases and possesses a thorough pharmacological knowledge cures all diseases and is never confused Cs. ni. 8.15.

45. "न शोधयति यद्दोषान् समान्नोदीरयत्यपि। समी करोति क्रुद्धांश्च तत् संशमनमुच्यते।" इति। तदपि द्विविधम् बाह्यमाभ्यन्तरं च। तत्र बाह्यमालेपपरिषेकावगाहाभ्यंग शिरोबस्तिकवलग्रह गण्डूषादिकम्। आभ्यन्तरं तु पाचन लेखन बृंहण रसायन वाजीकरण विषप्रशमनादिकम्।

(*palliation*) That which does not cleanse a vitiation, even though not exciting it from an even (state) (but) equalises the aggravated, is called a palliation. This is also of two kinds: extrinsic and intrinsic. Extrinsic are: ointment, sprinkling over, bathing, inunction, (rubbing with unctuous substances, unguents), pouring oil or liquid on the head, rinsing the mouth, gargling and the like. Intrinsic are: digestion, attenuation, augmentation, elixir, virilification, palliation of poison and the like. Da. ss. su. 1.27.

46. तान्युपस्थित दोषाणां स्नेह स्वेदोपपादनैः। पंचकर्माणि कुर्वीत मात्राकालौ विचारयन्।।
मात्राकालाश्रया युक्तिः सिद्धिर्युक्तौ प्रतिष्ठिता। तिष्ठत्युपरि युक्तिज्ञो द्रव्यज्ञानवतां सदा।।

(*pancakarma, the five medicative measures*) When the morbidities are impending (to get out), one should carry out the medical treatment of *pancakarma* (commencing from) oleation and sudation, taking (specially) into account the dosage and the time. The (effectivity of the) device, (the physician has to adapt) is dependent on (this factor of) dosage and the time. Success abides in (this) device. A physician who knows the art of application (i.e. of this device) is always superior to the other (physician) who is (merely) conversant with the knowledge of the drug materials (as such and not the further fineness of this art). Cs.su.2.15,16.

चिकित्सोपायः वमन विरेक नस्य निरुहानुवासनानि।

(This is) an expedient (measure) for medical treatment (and consists of) emesis, purgation, sternutation, non-oily and oily enema. Cs. su. 28, 27. ah. su. 37.8.

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निरूह वमन काय विरेक शिरोविरेकास्र विसुतय इति पंचकर्माणि।

Non-oily enema, purgation of the body, purgation (sternutation?) of the head and blood letting - these constitute the five medicative procedures. Ah. su., 14.5.

केचन स्नेहन स्वेदन वमन विरेचन बस्तीन् पंच कर्माण्याहुः, स्नेहन स्वेदने वमनादीनां पूर्वकर्मणी।

Some speak of inunction, sudation, emesis, purgation and enema as the five (medicative) procedures; inunction and sudation are preliminary measures to emesis and the rest. Ra. 18.195.

यदीरयेत् बहि दोंषान् पंचधा हि तत्।
निरूहो वमनं काय शिरोरेकोऽस्र विसुतिः।।

That which brings out the vitiation in a five fold manner - *that* is cleansing or purification: (this consists of) non- oily enema, emesis, purgatives, errhines and blood-letting. A samg.

शोधनं द्विविधमाचक्षते बहिराश्रयं शस्त्रक्षारग्निप्रलेपादयः।
अभ्यन्तराश्रयं वमन विरेचन स्थापन शोणित मोक्षणं च।।

Purificatory medication is said to be of two kinds: based on extenal means - surgery, caustics, cautery, ointments, and the like; based on internal means - emesis, purgatives, stypsis and blood-letting. Sarngadharadipika.

दोषाः कदाचित् कुप्यन्ति जिता लंघन पाचनैः।
ये तु संशोधनैः शुद्धा न तेषां पुनरुद्भवः।।

Vitiations conquered by means of fasting and digestives may sometimes get provoked (again). But those that are cleansed by purificatory medicines - there is no birth for them again. A. samg.

विकारेऽल्पे महत्कर्म क्रियालघ्वी महा गदे।
द्व्यमेतदकौशल्यं कौशल्यं युक्तकर्मता।।

A great medication when there is a little disorder, a slight medicative action when the disease is great - both of these are unskillfulness. Skillfulness is to do what exactly is required. Vrndamadhava.

47. मलापहं रोगहरं बलवर्ण प्रसादनम्।
पीत्वा संशोधनं सम्यगायुषा युज्यते चिरम्।।

(*purification*) One acquires long life by taking properly the purificatory treatment which cleanses one of impurities, destroys diseases and confers strength, colour and grace. Cs. su. 15. 22.

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एवं विशुद्ध कोष्ठस्य कायाग्निरभिवर्धति। व्याधयश्चोप शाम्यन्ति प्रकृतिश्च अनुवर्तते।।
इन्द्रियाणि मनोबुद्धिर्वर्णश्चास्य प्रसीदति। बलं पुष्टिरपत्यं च वृषता चास्य जायते।।
जरां कृच्छ्रेण लभते चिरं जीवत्यनामयः। तस्मात् संशोधनं काले युक्तियुक्तं पिबेन्नरः।।

When a person is thus purified in his viscera, his body-heat increases, diseases get quietened and normal health is restored. His senses, mind, intellect and complexion become clear and graceful and he acquires strength (and) plumpness (as well as) offsprings and virility. He gets aged with difficulty and lives long, free from diseases. Therefore a person should take purificatory procedures at the proper time and administered dexterously. Cs. su. 16.17-19.

दोषाः कदाचित् कुप्यन्ति जिता लंघन पाचनैः। जिता संशोधनैर्येतु न तेषां पुनरुद्भवः।।
दोषाणां च द्रुमाणां च मूलेऽनुपहते सति। रोगाणां च प्रसवानां च गतानामागतिर्ध्रुवा।।

The vitiations conquered by fasting and digestives may sometimes be provoked (again); but if conquered by purificatory measures, there is no coming back for them. When the root of the vitiations like that of the trees is not destroyed, there certainly occurs the reappearance of the diseases like that of the sprouts. Cs. su. 16. 20, 21.

इन्द्रियाणां मतोऽभ्यंगो गुरुदोषविमोक्षणः। त्वग्दोषशमनो बल्यो वातरक्त प्रसादनः।।
ग्राम्य धर्मातिगत्या च रथाश्वगजपातनात्। दण्ड मुष्ठिहतानां च रुजा श्रमविनाशनः। त्वचः प्रसादनो अभ्यंगः।

Taking oil bath with massaging for every limb thereof (i.e. abhi-anga) is considered beneficial for the sense faculties; it removes grave vitiations, alleviates the blemishes of the skin ; (is) strengthening, gratifying to vatic troubles of the blood; destructive of the pain and fatigue caused by excessive cohabitation, falling down from chariots, horses and elephants and those that are hit by means of sticks, or fists; (and) this oil bath is gratifying to skin (in general). Bhela. su. 6.17-19.

बुद्धिप्रसादं बलमिन्द्रियाणां धातुस्थिरत्वं ज्वलनस्य दीप्तिम्।
चिराच्च पाकं वयसः करोति संशोधनं सम्यगुपास्यमानम्।।

Clarity of mind, strength of body, steadiness and durability of the body constituents, effulgence of the digestive fire, a very slow onset of old age - these are conferred upon him who takes recourse to (lit. services) purificatory measures properly. Vagbhata. A. hr, su. 18. 60.

स्नेह स्वेदावनभ्यस्य कुर्यात् संशोधनं तु यः। दारुशुष्कमिवानामे शरीरं तस्य दीर्येते।।

He who carries out a purificatory medication without subjecting (himself) to inunction and sudation - his body gets split like a dry wood (not softened by earlier inunction) when bent. A. hr. su. 18. 59.

48. किं योनयः कति स्नेहाः के च स्नेहगुणाः पृथक्। कालानुपाने कति काश्च विचारणा।।
कति मात्राः कथं मानाः काच केषूपदिश्यते। कश्च केभ्यो हितः स्नेहः प्रकर्षः स्नेहने च कः।।
स्नेह्याः के के न च स्निग्धास्निग्धाति स्निग्ध लक्षणम्। किं पानात् प्रथमं पीते जीर्णे च किं हिताहितम्।।

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के मृदु क्रूरकोष्टाः का व्यापदः सिद्धयश्च काः । अच्छे संशोधने चैव स्नेहे का वृत्तिरिष्यते ।।
विचारणा केषु योज्या विधिना केन तत् प्रभो । स्नेहस्यामितविज्ञान ज्ञानमिच्छामि वेदितुम् ।।

(*oils and fats: the unctuous materials; sudation therapy*) What are the sources of the unctuous materials, how many are they and what are their individual qualities? What is the season and what are their several preparations? How many are their doses, how are they measured and which dose is prescribed for which case? Which is beneficial to whom? What is the maximum period for unction? Who are fit for oleation and who are not? What are the characeristics of the properly oleated, the non-oleated and the over-oleated? What is wholesome or unwholesome before, after and on full digestion, of the unctuous substance? Who are soft-bowelled and who, hard bowelled (i.e. not tolerating or tolerating severe dosages)? What are the likely complications and what, the remedies? What is the regimen desirable in palliative as well as purifactory oleation? On whom should the several preparations be employed and in what method? O Lord, the possessor of the limitless knowledge of oleation, I desire to know all of these. Cs. su. 13. 4-8.

स्नेहमग्रे प्रयुंजीत ततः स्वेदमनन्तरम् । स्नेह स्वेदोपपन्नस्य संशोधनमथेतरत् ।।

One should first administer oleation and then sudation. Purificatory or the other (i.e. palliative) procedure is only for the properly oleated and sudated. Cs. su. 13. 99.

शुष्काण्यपि हि काष्ठानि स्नेह स्वेदोपपादनैः । नमयन्ति यथान्यायं किं पुन र्जीवितो नरान् ।।
रोगर्तु व्याधितापेक्षो नात्युष्णोऽतिमृदुर्न च । द्रव्यवान् कल्पितो देशे स्वेदः कार्यकरो मतः
व्याधौ शीते शरीरे च महान् स्वेदो महाबले । दुर्बले दुर्बलः स्वेदः मध्यमे मध्यमो हितः ।।

Even dry sticks become soft and pliable when treated as needed with oiling and sweating. Why then to talk of a living (person)?

That sudation is considered efficacious, which is well contrived, well medicated and which is neither too hot nor too mild and also applied to the proper region and with due consideration of the disease, the season and the patient. Where the vitality of the patient's body and the condition of morbidity are very great and the season is cold, the maximum dose of sudation should be administerd. Where these are mild, the dose should be minimum; where they are moderate, the dose should be moderate. Cs. su. 14. 5,6,7.

सर्पिस्तैलं वसा मज्जा सर्वस्नेहोत्तमा मताः । एषु चैवोत्तमं सर्पिः संस्कारस्य अनुवर्तनात् ।।

Ghee, oil, lard, and marrow are the best among all the oleatives. Of them, ghee is the best, because, when cultured, it takes up the good quality of others besides retaining its own points of excellence. Cs. su. 13. 13.

ओदनश्च विलेपी च रसो मांसं पयो दधि । यवागूः सूपशाकौ च यूषः काम्बलिकः खडः ।।
सक्तव स्तिलपिष्टं च मद्यं लेहास्तथैव च । भक्ष्यमभ्यंजनं बस्तिस्तथा उत्तर बस्तयः ।।
गण्डूषः कर्णतैलं च नस्तः कर्माक्षितर्पणम् । चतुर्विंशतिरित्येता स्नेहस्य प्रविचारणाः ।।

Cooked rice, thinned fluidy cooked rice, meat-juice, meat, milk, curds, rice-gruel, soup, vegetables, legume soup, sesame and blackgram paste, reinforced

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fruit piece, corn meal, sesame paste, liquor, electual; eatable, oil bath, enema, post-enema, gargling, oil in the ear, errhine and flooding the eye - these are the twenty-four preparations used in oleation therapy. Cs. 13. 23-25.

49. लंघनं बृहणं को रूक्षणं स्नेहनं तथा।
स्वेदनं स्तम्भनं चैव जानीते यः स वै भिषक्।।
दोषाणां बहुसंसर्गात् संकीर्यन्तेह्युपक्रमाः।

(*lightening and roborant therapy*) He alone is the physician, who knows the timely (administration of) lightening and roborant therapies, the desiccation and oleation therapies and the sudation and the astringent therapies. As there are manifold combinations of vitiations, there are also many complexities of therapy. Still, just as the morbidities of the body do not transcend the three vitiations, so do the therapies also not transcend these six types. Cs. su. 22. 4, 43.

यत्किंचित् लाघवकरं देहे तल्लंघनं स्मृतम्। बृहत्वं यत् शरीरस्य जनयेत् तत् बृंहणम्।।
रौक्ष्यं खरत्वं वैशद्यं यत् कुर्यात् तद्धि रूक्षणम्। स्नेहनं स्नेहविष्यन्दर्मादव क्लेद कारकम्।।
स्तम्भ गौरव शीतघ्नं स्वेदनं स्वेदकारकम्। स्तम्भनं स्तम्भयति यद्गतिमन्तं चलं ध्रुवम्।।
लघूष्णतीक्ष्ण विशदं रुक्षं सूक्ष्मं खरं सरं। कठिनं चैव यद् द्रव्यं प्रायस्तल्लंघन स्मृतम्।।
गुरु शीतं मृदु स्निग्धं बहलं स्थूलमपिच्छिलम्। प्रायो मन्दे स्थिर श्लक्ष्णं द्रव्यं बृंहण मुच्यते।।
रूक्षं लघु खरं तीक्ष्ण मुष्णं स्थिरमपिच्छलम्। प्रायशः कठिनं चैव यद् द्रव्यं तद्धि रुक्षणम्।।
द्रवं सूक्ष्मं सरं स्निग्धं पिच्छिलं गुरु शीतलम्। प्रायो मन्दं मृदु च यद् द्रव्यं तत् स्नेहनं मतम्।।

Whatever causes lightness in the body is known as lightening therapy. That which causes the increase in the size of the body is called the roborant therapy; and that which causes dryness, roughness and clearness is the desiccation therapy. That which brings about viscosity, fluidity, softness and moistness (in the body) is the oleation therapy. That which causes perspiration and destroys stiffness, heaviness and cold is the sudation therapy. That (treatment) which astringes what is flowing and stabilises what is unstable is called the astringent therapy. That (substance) which is mainly light, hot, acute, clear, dry, subtle, rough, flowing and hard is (i.e. treatment with this is) lightening therapy. The substance which is mainly heavy, cold, soft, unctous, thick, gross, slimy, sluggish, stable and smooth is considered roborant. The substance which is dry, light, rough, acute, hot, stable, limpid (clear?) and hard is considered desiccant. The substance which is mainly fluid, subtle, flowing, viscid, slimy, heavy looking, sluggish and soft is considered unctuous. Cs. su. 22.9-15.

50. धातु पुष्टि करं शरीर वृद्धिकरं देहोपचयकरं वा।

(*roborance, roborant therapy, brmhana, rendering big*) (This is) a medicative procedure that serves for nourishment of the body constituents, growth of the body and prosperity or strengthening (lit. accumulation) of the somatic tissue. Su. su. 45. 112:

बृंहणं यत् देहस्य बृहत्वाय भवति। प्रायः बृंहणं द्रव्यं भूम्युदकात्मकम्।

Roborance is what becomes responsible for bigness of the body. A roborant material is mostly of the primordial elements of Earth and Water. As. su. 24. 41.

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प्रायो बृंहणं द्रव्यं गुरु शीतं मृदु स्निग्धं बहलं स्थूल पिच्छिलं मन्दं स्थिरं श्लक्ष्णं च।

Roborant material is mostly heavy, cold, soft, unctuous, dense, gross and slimy, slow, steady and smooth. Cs. su. 22.10.

सन्तर्पणापरपर्यायः बृंहण योग्या नराः व्याधि भैषज्यमद्यस्त्री शोक कर्शितान् भाराध्वोरः क्षत क्षीण रूक्ष दुर्बल वातलान् गर्भिणी सूतिकाबालवृद्धान् ग्रीष्मे अपरानपि बृंहयेत्।

Impletion is otherwise roborance. One should roborate those who ae emaciated due to disease, medication, liquor, woman and grief; or, those who bear heavy loads, walk for a long time, or weak due to a lesion at the chest or suffer from a dryness (of the body) or are habitually of *vāta* proclivity; the pregnant, the puerperal (a woman who has recently brought forth a child), the infant, the old and all others, during summer. (Ahr. su. 14.8).

बृंहण द्रव्याणि-मांसक्षीर सितासर्पिर्मधुर स्निग्ध बस्तयः तथैव स्वप्न शय्यासुखाऽभ्यंग स्नान निर्वृति हर्षणानि।

Roborant materials : meat, milk, white sugar, ghee, honey and non-oily enemas; and similarly, sleep, lying down, happiness, oil-bath, relaxation, and joyousness. Ahr. su. 14.1.34.

51. उपक्रमाश्च समासतो द्विविधाः - लंघनं बृंहणं चेति। लंघनं द्विविधं। शोधनं शमनं च। शोधनम् दोषान् बहिरीरयेत् तच्च पंचधा- निरूहो वमनं कायरेकः शिरोरेकोऽसृतिश्च। शमनं यद् दोषान्न शोधयति समान्नोदीरयति विषमांश्च समीकरोति। तच्च सप्तधा पाचनं दीपनं क्षुत् तृड् व्यायाम आतपो मारुतः इति।

(*medicative procedures, upakrama, setting about*) In summation, the medicative procedures are of two kinds; lightening and fattening (roborance). Lightening is of two kinds, cleansing and quietening. Cleansing throws out the morbidities and this is (done) in four ways: dry enema, emesis, purging of the body, purging of the head and blood letting. Quietening is what does not cleanse the morbidities, (but) does not provoke the equiposed, and equilibriates the imbalanced. This is (done) in five ways : digestion, stimulation, hunger, thirst, physical exercises, sun-bathing and (exposure to) wind. Ah. su. 14.7.

सर्व रोगाणां षडुपक्रमा भवन्ति लंघनं बृंहणं रूक्षणं स्नेहनं स्वेदनं स्तम्भनं च।

(For all the diseases, there are six medicative procedures:) lightening roborance, drying up, oleation, sudation and arresting; he who knows them, only *he* is a physician. Cs. su. 22.4.

यत्किंचिल्लाघवकरं देहे तल्लंघनं स्मृतम्। बृहत्वं यच्छरीरस्य जनयेत्तच्च बृंहणम्।।
रौक्ष्यं खरत्वं वैशद्यं यत् कुर्यात् तद्धि रूक्षणम्। स्नेहनं स्नेहविष्यन्द मार्दव क्लेदकारकम्।।
स्तम्भगौरव शीतघ्नं स्वेदनं स्वेद कारकम्। स्तम्भनं स्तम्भयति यद्गतिमन्तं चलं ध्रुवम्।।

Whatever it is that causes in the body a lightening, is lightening therapy. What creates a fattening and nourishment of the body is considered as roborant therapy. What creates dryness, roughness, and clarity is emaciation or attenuation therapy. Oleation therapy is what brings about inunction, liquidity, softness and wetness.

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Sudation therapy is destructive of arresting, heaviness and cold and causative of sweating. Arresting therapy is what permanently stops what is is on motion, and the movable. Cs. su. 22.9-11.

52. अन्नादनुपश्चात् पीयते तत्।

(*after-drink ; anupana*) This is what is drunk immediately after food. Ss. su. 46. 419.

अनुपानं तर्पयति प्रीणयति ऊर्जयति बृंहयति पर्याप्ति अभिनिर्वर्तयति भुक्तमवसादयति अन्नसंघातं भिनत्ति मार्दव मापादयति क्लेदयति जरयति आहारस्य सुखपरिणामितां आशुप्यवायितां च उपजनयति आयुषे बलाय भवति।

After-drink satisfies, pleases, invigorates, augments, brings about a satiation, sinks down what is eaten, breaks up the food clods, confers a softness, wets, digests, generates a comfortable effect of the food and causes immediate pervasion and becomes responsible for conferring life and strength. Cs. su. 27. 325.

तदादौ कर्शयित् पीतं स्थापयेन्मध्यसेवितम्। पश्चात् पीतं बृंहयति तस्मात् वीक्ष्य प्रयोजयेत्।।

This vexes (the person) if taken at the beginning, stablises if taken in the middle, augments if taken, after. Therefore, it should be employed after (proper) scrutiny. SS. su. 46. 438.

अनुपाने तु सलिलमेव श्रेष्ठम् सर्व रसयोनित्वात् सर्वभूत सात्म्यत्वात् जीवनादि गुण योगात् च।।

As on after-drink water alone is excellent because of its homology with all types of *rasas* (tastes), compatability with all beings, and as it is having a combination with life-giving drugs and is the (very) life.

स्निग्धोष्णं मारुते पथ्यं कफे रूक्षोष्णमिष्यते।
अनुपानं हितं चापि पित्ते मधुर शीतलम्।।
हितं शोणित पित्तिभ्यः क्षीर मिक्षुरसस्तथा।
अर्क शेलु शिरीषाणाम् आसवास्तु विषार्तिषु।।

Unctuous and hot after-drink is salutary in *vāta* provocation, dry and hot is desirable in *kapha* and sweet and cold is wholesome in *pitta* provocation. For plethoric patients, milk and sugar-cane juice are wholesome as after drink and a fermented distilation of *arka, śelu* and *sirisa* (is good) for those troubled with poison. Su. su. 46. 429:

ऊर्ध्व जत्रुगद श्वास कास प्रसेक हिध्मा स्वर भेदोरःक्षतिनः गीत भाष्य प्रसक्ताश्च। अनुपाने वर्ज्याः।

For those who have supra-clavicular diseases, breathing troubles, cough, nausea, lesions at the chest, and who are engaged as professionals in singing or oratory, after-drink is to be avoided. A samg. su. 10.55-56.

53. सूची कूर्चो वृत्तैक मूलोऽग्रे सुनिबद्ध सप्ताष्ट सूचिकः कुष्टश्वित्र व्यङ्.गेन्द्रलुप्तादिषु।

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(methods of administering medicine: mention of acupuncture ?) A brush of needles having a circular base and with seven or eight firmly fixed needles at the end, (is to be employed) in cases of leprotic (marks?) and leucoderma, deformities and local loss of sensation. Samg. su. 34. 131.

ताश्चतस्त्र औषधीरारागयेत् आराग्य कांचित् दन्तैः क्षोधितां कृत्वा दद्यात् पेषयित्वा कांचिदन्य द्रव्य संयोजितां पाचयित्वा दद्यात् कांचित् आमद्रव्य संयोजितां कुत्वा दद्यात् कांचित् शलाकया शरीरस्थानं विद्ध्वा। दद्यात् कांचिदग्निना परिदाह्य दद्यात् कांचित् अन्योन्य द्रव्य संयुक्तां यावत् पान भोजनादिपु अपि योजयित्वा दद्यात्।

These four drugs are to be pigmented and having pigmented, some are to be administered by ivory (styli) after making (the area) crushed; some, after grinding (the area), (or) some are to be given after cooking the medicine along with other medicines; and some, after mixing it with raw, undressd drug materials and some are to be applied after pricking the area (concerned) of the body with a stylus and some after burning (the area) with cautery (lit. fire) and some are to be given along with the regular or the routine (*yāvat*) meals and drinks along with other mutually (supporting?) drug materials. Saddharmapundarika.

सूच्यग्रेण प्रवेश्यांगे जात्यन्धाय प्रयोजयेत्।

(One) should administer (this medicine) to a congenital blind person after making it enter the end of a needle. Saddharmapundarika. Osadhiparivarta. p.16. 12

h. *environmental medicine*

54. तत्र वातं एवं विधं अनारोग्यकरं विद्यात्; तद्यथा-यथर्तुविषमं अतिस्तिमितं अतिचपलं अतिपरुषं अतिशीतं अत्युष्णं अतिरुक्षं अति अभिष्यन्दिनं अति भैरवारावं अति प्रतिहत परस्परगतिं अति कुण्डलिनं असात्म्यगन्ध बाष्प सिकतापांशु धूमोपहतिमिति।

Of these (viz. factors of the environment common to all people), the wind, if of the following description, is to be known as disease inducing or unhealthy; such as: unseasonal, totally still, violently blowing, exceedingly rough, intensely cold, intensely hot, excessively dry, excessively humid., fearfully clamorous, blowing from contrary directions and clashing with itself, with too many whirl-winds and charged with unwholesome odours, moisture, sand, dust and smoke.

उदकं तु खलु अत्यर्थविकृतगन्धवर्ण रस संस्पर्श क्लेद बहुलं अपक्रान्त जलचर विहङ्ग उपक्षीण जलेशय अप्रीततिकरं अपगतगुणं विद्यात्।

The waters that have an extremely aberrant smell, colour, taste and touch; too much damp; from which the aquatic birds have flown away, deserting it; where the (native) aquatic animals have become enfeebled; and, unpleasant - these are to be known as bereft of virtue.

देशं पुनः प्रकृतिविकृत्तवर्ण गन्ध रसस्पर्श क्लेद बहुलमुपसृष्टं सरीसृपव्याल मशक शलभमक्षिका मूपकोलूक श्मशानिक शकुनि जम्बूकादिभिः तृणोलूपोपवनवत्तं प्रतानादि बहुलमपूर्ववदवपतित शुष्क नष्ट शस्यं धूम्रपवनं प्रध्यातपतत्रिगणं उत्कुष्ट श्वगणं उद्भ्रान्तव्यथितविविधमृगपक्षिसंघ उत्सृष्ट नष्ट धर्म सत्य लज्जाचार शील गुण जनपदं शश्वत् क्षुभितोदीर्ण सलिलाशयं प्रतत उल्कापात निर्घात भूमिकम्पं अति भयारावरूपं रूक्षताम्रारुणसिताभ्रजाल संवृतार्कचन्द्र तारकं अभीक्ष्णं ससंभ्रमोद्वेगमिव सत्रासरुक्षितमिव सतमस्कमिव गुह्यकाचरितमिव आक्रन्दित शब्द बहुलं च अहितं विद्यात्।

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The country of the following description is to be known as unwholesome; having colour, odour, and taste that are unnatural; excessively damp; infested with reptiles, beasts of prey, mosquitoes, locusts, flies, mice, owls, vultures, jackals and the like; abounding in woods of weeds and *ulūpa* grass; with a plentiful of creepers; where crops have either fallen, withered, or been destroyed in an unprecedented manner; where the winds are smoky; where flocks of birds continuously cry; where the baying of the dogs assails the ears always; where herds of animals and flocks of birds of various kinds are in a state of alarm and pain; where, amidst the people, morality, truth, modesty, (adherence to) custom, character and virtue have either declined or been given up; where the reservoirs of the water are always agitating and upheaving; which is frequently subjected to the incidence of meteorites, thunderbolts and earthquakas; full of menacing sounds and sights; where the sun, the moon and the stars are frequently covered by dry, coppery, ruddy and grey network of clouds; and which is of very much lamenting sound as if full of constant alarm and agitation, as if crying with distress and pain, as if full of darkness, as if something secretive is always taking place and is visitied by gnomes.

कालं तु खलु यथर्तु लिंगात् विपरीतलिंगमतिलिंग हीनलिंग च अहितं व्यवस्येत्।

A season that evinces characters that are opposite to normal, or does so either in excess or deficiency, is to be regarded as unwholesome. Cs. vi. 3.6.

वातात् जलं जलात् देशं देशात् कालं स्वभावतः। विद्यात् दुष्परिहार्यत्वाद्धतीयस्तरमर्थवित्।।
वाय्वादिषु यथोक्तानां दोषाणां तु विशेषवित्। प्रतीकारस्य सौकर्ये विद्याल्लाघव लक्षणम्।।
चतुर्ष्वपि तु दुष्टेषु कालान्तेषु यदा नराः। भेषजेन उपपाद्यन्ते न भवन्ति आतुरास्तदा।।

(Among these four that are unhealthy and hence conducive to epidemics), the man of understanding will know that the water is more important than wind, and the country more important than water and the season, yet more important than the country by virtue of their degree of indispensability. The specialist should know that the above mentioned aberrations of wind and the other factors are progressively easy of treatment in the order mentioned. Even if all the four factors including time, become vitiated, as long as men are sustained by medicines, so long will they remain free from disease. 10-12.

55. देश सात्म्यमजानन्तः कथं कुर्युश्चिकित्सतम्।
कस्य देशस्य मध्ये तु कुरुक्षेत्रं प्रतिष्ठतम्।

(*geographical medicine* :) "Without knowing (the factor of) homologation in accordance with (different) geographical region, how can we proceed with our medical treatment? In the middle of which region is situated, Kuruksetra?"

कुरुक्षेत्रं मध्यदेशात् योजनानां शतं परम्। समस्तान् षड्रसान् प्रायो भुंजते मध्य देशजाः।।
भक्ष्य भोज्यान्नवीरास्ते तु भुंजन्तो वा असकृत्तथा।

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Kurukṣetra is situated in the mid-region (of our country), its extense being greater than ten *yojanas*. People of this mid-region probably take all the six *rasas*. They are brave in eating sweet-meats, variety of edibles and food and they eat many a time.

पूर्व देशस्तु विज्ञेयो मधुरः शीतलो गुरुः। कुमार वर्तनीमादौ कटीवर्षस्तथैव च।।
मगधासु महाराष्ट्रं ऋषभद्वीपमेव च। पौंड्रवर्धनकं चापि मृत्तिका वर्धमानकम्।।
कर्वटं च समातंगं ताम्रळिप्ति स चीरकम्। प्रियंगुं अथ कौशल्यं कलिंग पृष्ठ पूरकम्।।

People of the eastern region are considered to be (eaters) of sweet, cold and heavy (food stuffs). (Of these,) first is Kumāravartanī, then Kalīvarsa, Maharāshṭra in Magadha (?), and then Vṛṣabha island, Paundravardhanaka, Mṛttikāvardhanaka, Karvata along with Mātanga, Tāmralipta along with Chīra (China?) Priyangu and then Kauśalya, Kalinga and Pristapuraka.

एषु प्लीहविनो मर्त्या गलगण्डिकमेव च। गुड शाल्योदन प्रायां मत्स्य भोजन सेविनः प्रायशो मधुराहारा वात श्लेष्मात्मका नराः।

People of these regions are afflicted with splenic enlargement, and goitre. They probably eat jaggery, rice and fish (as their staple food stuff). Their food is probably mainly sweet and the people here are of the *vāta* and *śleṣma* nature.

तेषां कटुक तिक्तं च रूक्षमुष्णं च भोजनम्। यच्चान्यदपि श्लेष्मघ्नं तेषां तत्तत् प्रयोजयेत्।।

For them, food that is bitter and pungent, dry and hot is desirable. Whatever else that would destroy *śleṣma* vitiation, should be employed for them.

कंचीपदा नवध्वाना कावीरास्तुल्ययोरपि। वानसी कुमुदा राज्यं चिरिपालिस्तथैव च।।
चीर राज्यंच चोराणां पुलिन्द द्रविडेषु च। करघाट शनानां च विदेहा मण्डपेषु च।।
कान्तारं च वराहं च घटा स्वाभीरमेव च। दक्षिणं दिशमाश्रित्य देशाः ...

The regions in the south are: Kancipadā, Navadhvānā, Kāvīra - all similar; Vānasi, Kumuda rajya, Ciripāli, Cīra Kingdom of the Coras, Pulinda of the Dravida, Karaghāṭa among the Śanas, Videha among the Maṇḍapas, Kântāra, Varāha and Abhira among the Ghaṭas. Ks. Khi. 25. 3-15.

56. क्षारः पुनरौष्ण्य तैक्ष्ण्यलाघवोपपन्नः क्लेदयत्यादौ पश्चाद्विशोषयति स पचन दहन भेदनार्थं उपयुज्यतेः सोऽतिप्रयुज्यमानः केशाक्षिहृदयपुंस्त्वोपघातकरः संपद्यते। ये हि एनं ग्राम-नगर निगम जान पदाः सततमुपयुञ्जते त आन्ध्य षाण्ढय स्वालित्य पालित्य भाजो हृदयापकर्तिनश्च भवन्ति, तद्यथा-प्राच्याश्चीनाश्चः तस्मात् क्षारं नाति उपयुंजीत।

Alkali is possessed of hot, acute and light qualities; it first acts as a deliquescent and later, as a desiccant. It is used as a digestive, caustic and disruptive agent. If used in excess, it results in harmful effects to hair, eyes, heart and manhood. Those communities, whether rural, urban or itenarant, which make constant use of alkali, develop blindness, impotency, baldness and greyness of hair

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and constricting pain in the cardiac region; such as the people of the Eastern Countries and the Chinese. Therefore, one should not use too much of alkali. Cs. vi. 1. 17.

लवणं पुनरौष्ण्य तैक्ष्ण्योपपन्नम् अनतिगुरु अनति स्निग्धम् उपक्लेदि विस्रंसन समर्थम् अन्नद्रव्य रुचिकरम् आपातभद्रं प्रयोगसमसाद्गुण्यात् दोष संचयानुबन्धं तद्रोचन पाचनोपक्लेदन विस्रंसनार्थं उपयुज्यते। तदत्यर्थं उपयुज्यमानं ग्लानि शैथिल्य दौर्बल्याभिनिर्वृत्तिकरं शरीरस्य भवति। ये हि एनद् ग्राम नगर निगम जानपदः सततमुपयुंजते ते भूयिष्ठं ग्लास्नवः शिथिल मांस शोणिता अपरिक्लेश सहाश्च भवन्ति।

(Common) salt is possessed of hot and acute qualities, not very heavy,not very viscid (and) is deliquescent, capable of being a laxative, gives a relish to food stuffs; (and) given in proper course and combination, it has immediate beneficial action, but continued over a long time results in morbid cumulative effect. It is used as an appetiser, digestive, deliquescent and laxative. For one who uses it in excess, there will occur depression, flabbiness, and debility. Those communities which are given to use salt constantly (and in excess) whether they are country people, city dwellers or itenerants, become languid, flabby and anaemic and are unable to bear hardships. Cs. vi. 1. 18(1).

तद्यथा-बाह्लीक सौराष्ट्रिक सैन्धव सौवीरकाः ते हि पयसाऽपि सह लवणमश्नन्ति। येऽपीह भूमेरत्यूषरा देशास्तेषु ओषधिवीरुद्वनस्पति वानस्पत्या न जायन्तेऽल्पतेजसो वा भवन्ति। लवणोपहतत्वात्। तस्माल्लवणं नात्युपयुंजीत।

ये हि अति लवणसात्म्याः पुरुषास्तेषामपि खालित्य पालित्यानि वलयश्च अकाले भवन्ति तस्मात् तेषां तत्सात्म्यतः क्रमेणागमनं श्रेयः।

सात्म्यमपि हि क्रमेणोप निवर्त्यमानमदोषं वा भवति।

They are the people of Bāhlīka, Saurāshṭra, Sindh and Sauvīra. They habitually take salt even in their milk. And, wherever there are saltish regions of land, (there,) the herbs, the creepers, the trees and the other vegetation either do not grow at all or are of poor quality, on account of the inhibiting effect of salt on their growth. Therefore, salt should not be used in excess. Even those people who have become tolerant to excessive use of salt get premature baldness, greyness and wrinkles. Even among them, it is advisable to effect a gradual withdrawal from the habit formed. A gradual withdrawal as previously laid down from a habit will be attended with no severe reaction or with very mild reaction Cr. vi. 1. 18, 19.

i. *military medicine*

57. विजिगीषुः सहामात्यैः यात्रा युक्ताः प्रयत्नतः। रक्षितव्यो विशेषेण विषादेव नराधिपः।।
पन्थानभुदकं छायां भक्तं यवसमिन्धनम्। दूषयन्त्यरयस्तच्च जानीयात् शोधयेत् तथा।।
तस्य लिंगं चिकित्सा च कल्पस्थाने प्रवक्ष्यते। (स च विषेण दूषितोऽश्वादिखुरक्षुण्णरेणुना रोम कूप नासा विवरादिषु प्रविशन् विकारं जनयति। डल्हणः)।

(*duties of the physician*) The king who has started on a military expedition along with his ministers and is intent on victory should be protected (by his physician) with all the efforts needed - specially from the poisons. The enemies poison the roads (when they are poisoned, the dust agitated by the hoofs of the horses will create disorders, entering the hair follicles, the nasal openings and the

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like. Ḍa), the waters, the food, the shadows (of the trees, e.g. the shadow of *bhallātaka* immediately causes oedema. Ḍa), the fodder and the fuel. (The physician) should understand them all and cleanse them. Their symptoms and treatments will be told in the section on Formulations (Kalpasthāna). Ss. su. 34. 4-6.

छायाश्रयवृक्षादीनां दूषणात् छाया दुष्टिर्भवति। दुष्ट वृक्षादिच्छायाश्रिणो वृक्षादिगतेन सविषेण पवनेन बाध्यन्ते।

By poisoning the shady treess and the like, there will occur the poisoning of their shade; those who take shelter under such posioned treess will be afflicted by the posioned winds coming from such trees and the like. Cakra.

स्कन्धावारे च महति राजगेहदनन्तरम्।
भवेत् सन्निहितो वैद्यः सर्वोपकरणान्वितः।।
तत्रस्थमेव ध्वजवद् यशः ख्यातिसमुच्छ्रितम्।
उपसर्पन्ति अमोहेन विष शल्य आमयार्दिताः।।
स्वतन्त्र कुशलोऽन्येषु शास्त्रार्थेषु अबहिष्कृतः।
वैद्यो ध्वज इव आभाति नृपतद्धि पूजितः।।

(During such expeditions) the physician should be at king's camp, next to the great royal residence, along with all his equipments (mechanical contrivances, surgical instruments, caustics and anti-toxins-Ḍa). Patients suffering from poison, surgical afflictions and (other) diseases will come with no second thought and full trust to him stationed there like a flag flying high with his (natural) fame. A (military) physician who is expert in his own field and in addition is not averse to (lit. abandoned from) the knowledge of other (associated) sciences as well, really shines like a flag, revered by the king as well as other experts in the field. Ss. su. 34. 12-15.

j. *pulse reading - nāḍī vijnāna*

58. गदाक्रान्तस्य देहस्य स्थानान्यष्टौ निरीक्षयेत्। नाडी मूत्रं मलं जिह्वां शब्द स्पर्श दृगाकृतिम्।।

In the body of a person overcome with disease, eight places are to be scrutinised: the pulse, the urine, the stools, the tongue, the (peculiarities of the) sound (ausculation details?), the touch, the eye and the (general) form . 1.

आदौ वातवहा नाडी मध्ये वहति पित्तला। अन्ते श्लेष्मविकारेण नाडिकेति त्रिधामता।
वातादिके वहेन्नाडी प्रव्यक्ता तर्जनीतले। पित्ते व्यक्ता मध्यमायां तृतीयाङ्गुलिका कफे।।

First there is the *vāta* (changes or alterations) carrying pulse, in the middle runs the *pitta* (aberration) pulse and at the end, is the pulse of the *śleṣma* (aberration) - the pulses are (thus) said to be of three types in terms of their reflection of the) aberration. If *vāta* aberration is more, the pulse courses very obviously at the base of the *tarjani* or the fore finger, in *pitta*, this is obvious at the mid finger and in *kapha*, at the little finger. 11

वाते वक्र गतिर्नाडी चपला पित्तवाहिनी। स्थिरा श्लेष्मवती प्रोक्ता सर्वलिंगा च सर्वगा।।

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(*the ryhthm of the pulse*): The coursing of the pulse is deviant in *vāta*, fickle in *pitta* and steady in *śleṣma*; in cases of a synergesis of all three *(doṣas)*, the coursing is also in all the three ways. 15.

वातोद्रेके गतिं कुर्याद् जलौका सर्पयोरिव। पित्तोद्रेके तु सा नाडी काक मण्डूक्योरिव।।
हंस स्येव कण्ठोद्रेके गतिं पारावतस्य च। नाडीन्धमे त्रिदोषे तु गतिं तित्तिरि लावयोः।।

(*further nuaness*): In excitations of *vâta* the coursing is like that of the leech or a snake. In excitation of *pitta*, the pulse is like that of a crow or a frog. In excitations of *kapha* it is like that of a swan or a partridge. In the throbbings of the pulse of all the three vitiation, the coursing is like that of a *tittiri* or a *lāva* bird. 17.18.

स्थित्वा स्थित्वा गतिं याति सा नाडी मृत्यु दायिनी। अतिशीता च या नाडी सा ज्ञेया प्राणहारिणी।।
उष्णा वेगवती नाडी ज्वर कोपे प्रजायते। उद्वेग क्रोध कामेषु भय चिन्तोदये तथा।

(*pulse fore-telling death*) That pulse which course with stoppings in the middle -that should be knows as conferring death. A pulse which is very cold is to be known as snatching life. 22.

There arises a hot and rapidly flowing pulse in the aggravation of fever, and also in emotional outbursts, anger, lust, fear and the onset of brooding. 24 (all from) Rāvaṇanadi parīkṣā.

59. आपादतः प्रतत गात्र मशेषमेषामास्तकादपि च नाभिपुरः स्थितेन।
एतन्मृदंग इव चर्मचयेन नद्धभ् कायं नृणामिह शिराशत सप्तकेन।।

(*vasculature and circulation*) From foot to head, spreading over the whole of the body, without leaving any place as a residue and commencing from the navel as its fore-front, man's body is tied with the cover of the skin (and) by seven hundred 'siras' like the drum (tied with its thongs). Kaṇāda nāḍī.

स्नायुर्नाडी वसा हिंसा धमनी धामनी धरा। तन्तुकी जीवितज्ञा च सिरा पर्य्याय वाचकाः।।

Snāyu, nāḍī, vasā, himsrā, dhamani, dhāamani, dharā, tantukīa, jīvitagnā and *sira* - (all of) these are alternative or synonymous terms. Kanadanadi.

यदा तु रक्तवाहीनि रससंज्ञावहानि च।
पृथक् पृथक् समस्ता वा स्रोतांसि कुपिता मलाः।
मलिनाहार शीलस्य रजोमोहावृतात्मनः।
प्रतिहत्यावतिष्ठन्ते जायन्ते व्याधयस्तदा।।

When impurity gets provoked in the channels of transport (in general) and the channels (of transport) for blood, for nutrient-fluids and for sensation (in particular) and these become struck down thereby, (as it happens) in a person who habitually consumes unclean food and whose self is covered over by *rajas* (passion) and *tamas* (delusion), then do arise the diseases. Cs. su. 24. 25, 26.

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तत्र केचिदाहुः सिरा धमनी स्रोतसामविभागः सिरा विकारा एव धमन्यः स्रोतांसि चेति। तत्तु न सम्यक्। अन्या एव धमन्यः स्रोतांसि च सिराभ्यः। कस्मात्। व्यजंनान्यत्वात् मूलसन्नियमात् कर्म वैशेष्यात् आगमाच्येति। केवलं तु परस्पर सन्निकर्षात् सदृशागमकर्मत्वात् सौक्ष्म्यत्वाच्च विभक्तकर्मणामप्यविभाग इव कर्मसु भवतीति।

Some say here: there is no difference among *sirā, dhamanī* and *srotaḥ dhamanī* and *srota* are but the modifications of *sirā* itself. But this is not correct. *Dhamanis* are something different from *srotas* and *siras*. Why? because of the differences in their (many) specific characters, places and rules of their origin, specialisations in function and also as indicated in (many specific) traditional texts (not quoted here). It is solely because of their mutual close proximity, analogous reference in the traditional literature and functioning and minuteness, they become undifferentatable in function even though they (do really) have diverse functionings. Ss. Sa. 9.3.

विकासमथ संकोचमत्र नाली हृदि स्थिता।
यदायाति तदा प्राणैश्छेदैरायाति याति च।।
बाह्योपस्कर भस्त्रायां यथा आकाशास्पदात्मकः।
वायुर्यात्यपि च आयाति तथा अत्र स्पन्दनं हृदि।।

Expansion and contraction (occur) in the (blood) vessels (lit. nāḍi - the tubules) situated in the heart. When the (force of) life (i.e. the flow of blood) comes and goes through the space within (the tubules) (then) just as the bellows outside (expand and contract) when the air comes and goes, similarly does the throbbing occur in the heart. Yogavasistha. ni. 128.9-10.

हृदयं मनसः स्थानं ओजसश्चिन्तितस्य च। मांसपेशी च यो रक्तपद्माकारमधोमुखम्।।
योगिनो यत्र पश्यन्ति सम्यग् ज्योतिः समाहिताः। रसोयः स्वच्छतां याति स तत्रैव अवतिष्ठते।।
ततो व्यानेन विक्षिप्तः कृत्स्नं देहं प्रपद्यते।

Heart is the seat of the mind as well as that of the vitality (*ojas*) and what is thought. (It is this again) which is a (piece of) flesh and muscle similar in shape to a red lotus facing downwards. (This is where) the yogis see the perfect light situated well; where the nutrient fluid becomes clear, stays there again and from there outwards reaches to all over the body scattered as it is by the dynamic force of (i.e. *vāyu* called) *vyāna*. Ahr. su. 12.25.

परिव्याप्याखिलं कायं धमन्यो हृदयाश्रयाः। वहन्त्यः शोणितस्रोतः शरीरं पोषयन्ति ताः।।
हृदयाकुंचनात् रक्तं कियदुत्प्लुत्य धामनीम्। तत्संचितं तदुत्थश्च प्रविश्य च अपरास्वपि।।
व्रजित्वा निखिलं देहं ततो विशति फुफ्फुसम्। फुफ्फुसात् हृदयं याति क्रियैवं स्यात् पुनः पुनः।।
रुधिरोत्प्लववेगेन धमनी स्पन्दने मुहुः। उत्प्लव प्रकृतेर्भेदात् भेदः स्यात् स्पन्दनस्य च।।
स्थौल्यादिकं धमन्याश्च तत्प्रकृत्यैव जायते।

Richly pervading the whole of the body and with heart as the base, the arteries carry about the stream of blood (and) they nourish the body. Springing up some quantity of the blood into the minor arteries by the contraction of the heart, getting collected there (i.e. in the minor arteries), getting up from there (later) and entering even other (more) minor arteries even (afterwards and) thus reaching the

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whole of the body, (the blood) then enters the lung. From the lung, it comes to the heart. Such an act occurs again and again in this way. (it is by) the momentum of the leaping up of the blood that the repeated throbbing of the artery takes place. It is by the differences in the nature of this leap that differences in the throbbing (of pulsation) occurs. Stoutness of the arteries and the like (atherosclerosis?) occur in course of time itself. Naḍidarpaṇa.

60. षष्ट्या स्पन्दास्तु मात्राभिः पंचाशद् भवन्ति हि। शिशोः सद्यः प्रसूतस्य पंचाशत्तदनन्तरम्।
चत्वारिंशत्ततः स्पन्दाः षटत्रिंशद् यौवने ततः। प्रौढत्वेकोनविंशत् स्युरेकत्रिंशात्तः परम्।।
योषितां पुरुषाणांच स्पन्दास्तुल्या प्रकीर्तिताः। प्रौढानां रमणीनां तु द्व्यधिका सम्मता बुधैः।

(*the pulse*) The pulse rate of an infant just delivered is of sixty units of throbs or sixty to hundred and five; hundred and five, from then onwards. One hundred and four throbs thence forth and three hundred and six in the youth. In the adult, it is two hundred and ninety nine, three hundred and one from then onwards. The throbs of the ladies and the men are said to be simiar. But in the adult ladies, this is said to be twice greater, by the wise.

दशगुर्वक्षरोच्चार कालः प्राणः षडात्मकैः। तैः पलं स्यात्तु तत् षष्ट्या दण्ड इत्यभिधीयते।।

The time taken for uttering ten stressed syllables (lit. letters) is called a *prāṇa*. Six of them forms a *pala* and sixty of theses latter is designated a *daṇḍa*.

एवं बहु विधाद्रोगाद् तत्तल्लिंगानुबोधनी। नाडीनां च गतिस्तद्वत् भवेत् कालात् पृथक् पृथक्।।
हृदयस्य बृहद् भागः संकोचं प्राप्यते यदा। प्रसारयेत् तदा नाडी वायुना रक्तवाहिनीम्।।

In this way, because of the many types of the diseases and (because of) indicating these respective diseases, the course of the pulse becomes diversified and segregated similarly over time. When the greater portion of the heart gets contracted, the pulse also spreads out in the arteries carrying the blood, because of the dynamic force created thereby (lit. by *vāyu*).

तर्पयन्ति असृजं देहे व्याघातैर्गति भेदतः। तेजः पुंजा चंचला च दुर्बला क्षीण धीरकैः।।

(This pulsation) satisfies the body with the blood by its different changes (that are) caused by various disturbances and designated as efflulgent, fickle, weak, feeble and steady (five in number).

रक्तोष्णे शीघ्रगा नाडी चंचला च ज्वरे भवेत्। ज्वरारम्भे तथा वाते तेजः पुंजा गतिः सिरा।।
दुर्बले ज्वर रोगे च अतिसारे प्रवाहिके। दुर्बला क्षीणदा नाडी प्रबला प्राणघातिका।।
बहुकालगताः रोगा सा नाडी धीरगामिनी।

In heamothermia the pulse is quick-moving. It becomes fickle in fever. The capillary is very effulgent in its pulsation at the time of the onset of the fever. When the fever has become settled as a disease (lit. the fever-disease) as well as in catarrhic diarrhoea and *pravāhika*, it is weak. A weak or a feeble pulse or a very violent pulse is fatal. When the disease is long-standing, the pulse moves steadily.

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तस्य चेन्मन्ये परिमृश्यमाने न स्पन्देयातां परासुरिति विद्यात्।

If the jugular artery does not show any throbbing, when being touched, one should consider that the patient has his life departed. Ca. in. 3.6.

व्यायाम तृष्णातपपीडितस्य बुभुक्षतो भुक्तवतो हि जन्तोः।
अश्यंजन स्नान वधोपभोग क्रियासु नाडी न विबोधनीया।।

(The normalcy of the pulse particulars) cannot be ascertained in persons troubled by exercise, thirst and sun; the hungry; or the man who has just taken food; and in acts of inunction, bathing and cohabitation.

नाडीगतिमविज्ञाय यः करोति चिकित्सितम्। आरोहति गिरिं सोऽन्धस्तस्य यान समं विदुः।।

One who carries out medication without understanding the movement (particulars) of the pulse, his (methodology) is known to be equal to that of the vehicle of a blind man who climbs a mountain. Basavarajiya Nadividhanam, 32, 35.

61. स्रोतांसि सिराः धमन्यः रसायन्यः रसवाहिन्यः नाड्यः पन्थानः मार्गाः शरीरच्छिद्राणि संवृतासंवृतानि स्थानानि आशयाः निकेताश्चेति शरीर धात्वावकाशानां लक्ष्यालक्ष्याणां नामनि भवन्ति। तेषां प्रकोपात् स्थान स्थाश्चैव मार्गगाश्च शरीर धातवः प्रकोपमापद्यन्ते इतरेषां प्रकोपादितराणि च। स्रोतांसि स्रोतांस्येव धातवश्च धातूनेव प्रदूषयन्ति प्रदुष्टाः। तेषां सर्वेषामेव वातपित्त श्लेष्माणः प्रदुष्टा दूषयितारो भवन्ति।

The channels, the veins, the arteries, the tracts and the conductors transporting the assimilable essence of the food, the tubules, the paths, the ways and the crevices of the body, closed (with an envelope of its own, as in the arteries for e.g.) or unclosed (as in the crevices), the place (of accidental or wayside presence), the receptacles (where the material gets stored) or the habitation (or the place of origin) - these are all the names of the spaces for the constituents of the body, visible or invsible. By their provocation, the constituents of the body as they are stationed in a place or as they are on their way (elsewhere) become provocated (in their turn) and they will provoke others as well. For instance, the morbid channels vitiate other channels and the morbid constituents vitiate other constituents. For all of them, it is the vitiated *vāta, pitta* and *śleṣma* that morbify others because of their own vitiated nature. Cs. vi. 5.9.

62. स्वस्थस्य ऊर्जस्करंयत्तु तद् वृष्यं तद्रसायनम्

k. *rasāyana-elixirsation*

47. (*some general statements*) Whatever that serves for augmenting the excellence of health, *that* is the virilifying (agent) and that is the elixir. Ca. ci. 1.5.

दीर्घमायुः स्मृतिं मेधां आरोग्यं तरुणं वयः। प्रभावर्ण स्वरौदार्यं देहेन्द्रियबलं परम्।।
वाक्सिद्धिं प्रणतिं कान्तिं लभते ना रसायनात्। लाभोपायो हि शस्तानां रसादीनां रसायनम्।।

Long life, (excellent) memory, brilliance of intellect, health (and) young age; an opulence of lustre (of the body), colour and voice; a great strength of the body and the senses; success in speech; a reverential attitude and a loveliness - one secures (all of) these by elixirisation. (This is) the expediency of securing the (highest)

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profits out of the nutrient fluids that have been (properly) processed (within the body). Cs. ci. 7,8.

रसायनानां द्विविधं प्रयोगमृषयो विदुः। कुटीप्रवेशिकं चैव वातातपिकमेव च।।

Sages know of two types of elixirisation; entry into a hut (i.e. an abode, specially constructed for this purpose, according to the details given viz., an indoor management) and acclamatisation to the conditions of the weather (lit. air and sun) pevailing (i.e. taking precautions while living in the ordinary conditions outside viz., an out-door management). Cs. ci. 1.16.

पूर्वे वयसिमध्येवा मनुष्यस्य रसायनम्। प्रयुंजीत भिषक् प्राज्ञः स्निग्धशुद्धतनोः सदा।
नाविशुद्ध शरीरस्य युक्तो रसायनो विधिः। न भाति वाससि क्लिष्टो रंगयोग इवाहितः।।

It is in the early years or in the middle age that the physician should administer elixirisation for a person; and always to a person of unctuous and pure body. The methodology of elixirsation is not fit for a person whose body is not purified – just as an application of a dye does not shine on a cloth already soiled by an undesirable colouration. Su. ci. 27. 3,4.

प्राणकामाः शुश्रूषध्वम् इदमुच्यमानं अमृतमिवापरमदितिसुतहितकरमचिन्त्यादभदुतप्रभावमायुष्यं आरोग्यकरं वयसः स्थापनं निद्रातन्द्रा श्रम क्लमालस्य दौर्बल्यापहरं अनिल कफ पित्तसाम्यकरं स्थैर्यकरमबद्ध मांसहरमन्तरग्निसन्धुक्षणं प्रभावर्ण स्वरोत्तमकरं रसायन विधानम्। अनेन च्यवनादयो महर्षयः पुनर्युवत्वमापुर्नारीणां चेष्टतमा बभूवुः स्थिरसम सुविभक्त मांसाः सुसंहतस्थिर शरीराः सुप्रसन्न बलवर्णेन्द्रियाः सर्वत्र अप्रतिहत पराक्रमाः क्लेशसहाश्च।

Ye, who desire long life, listen to this methodology of elixirisation as I speak about it; this is beneficial like a second ambrosia to the gods; its influence is incomprehensibly wonderful; it confers long life and health and stops the age; it removes sleepiness, torpor or dullness, fatigue, lassitude and weakness; it homogenises the (three vitiations of) *vāta, pitta* and *kapha*; it confers stability in the body and renders the muscles well knit; it kindles well the inner (digestive) fire: and, it improvs the lustre and colour of the body and the quality of the voice. it is by this means that great sages like Chyavana and others once again attained youth, became most active among the ladies, with muscles stable and well disposed, body well knit and steady; strength, colour and senses, highly gracious; prowess, uncountered everywhere; and, tolerant to trials and tribulations. Cs. ci. 1.2.1.

सर्वे शरीरदोषा भवन्ति ग्राम्याहारादम्ल लवण कटुकक्षार शुष्क शाक मांस तिल पलल पिष्टान्न भोजिनां विरुढं नव शूक शमी धान्य विरुद्ध सात्म्य रूक्षक्षाराभिष्यन्दि भोजिनां क्लिन्न गुरुपूति पर्युपित भोजिनां विषमाध्यशन प्रायाणां दिवास्वप्न स्त्री मद्य नित्यानां विषमातिमात्र व्यायामा संक्षोभित शरीराणां भय क्रोध शोक लोभ मोहायास बहुलानाम्; अतो निमित्तं हि शिथिली भवन्ति मांसानि विमुच्यन्ते सन्धयः विदह्यते रक्तं विष्यन्दते च अनल्पं मेदः न सन्धीयते अस्थिषु मज्जा शुक्रं न प्रवर्तते क्षयमुपैत्योजः; स एवं भूतो ग्लायति सीदति निद्रातन्द्रालस्य समन्वितो निरुत्साहः श्वसिति असमर्थश्चेष्टानां शारीर मानसानां नष्ट स्मृति बुद्धिच्छायो रोगाणामधिष्ठान भूतो न सर्वमायुरवाप्नोति। तस्मादेतान् दोषानवेक्षमाणः सर्वान् यथोक्तान् अहितानपास्य आहार विहारान् रसायनानि प्रयोक्तुमर्हतीति उक्त्वा भगवान् पुनर्वसुरात्रेय उवाच।

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All morbidities of the body ensue from processed (and not natural or, wild) food; for those who consume acidic, salty, bitter, caustic and dry vegetables and flesh and food stuff made up of sesame, ground sesame and flour, or, food stuff made up of sprouted and fresh awned cereals (like barley, wheat) or legumes (like pea, black gram); or food that is antagonistic, uncompatible, dry, caustic and laxative; or, food that is stuck together, heavy, worm infested and kept overnight; or who eat mostly what is imbalanced or eat when the previous food stil remains undigested; or, who are habitually indulgent in sleeping by day, women and liquor; or whose body is agitated due to imbalanced and excessive physical exercises; or who have plenty of fear, anger, greed, delusion, and fatiguesome efforts. it is because of this reason, indeed, their flesh becomes loosened, joints get liberated, blood scorched, much of fat run down; the marrow does not get attached to the bone, semen does not commence out, and the vigour of life attains a decline. Having become thus, he gets exhausted, and wasted out; completely possessed with sleepiness, dullness and laziness, he just breathes with no enthusiasm, incapable of activities of the body or the mind; memory, intellect and aura - all lost out, and becoming an abode of diseases, he will not attain his full span of life. Therefore, looking at these vitiations and pronouncing that they are fit to receive elixirisation procedures after giving up all the above said foods and pastimes, the revered Atreya Punarvasu said. Cs. ci. 1.2.3.

न रोगाणां न दोषाणां न दूष्याणां च परीक्षणम्। न देशस्य कालस्य कार्यं रसचिकित्सिते।।
साध्येषु भेषजं सर्वं ईरितं तत्ववेदिना। असाध्येष्वपि दातव्यं रसोऽतः श्रेष्ठ उच्यते।।
अल्पमात्रे प्रयोगित्वात् अरुचेरप्रसंगतः। क्षिप्रं आरोग्यदायित्वात् ओषधिभ्योऽधिको रसः।।

(elixir therapy, *rasāyana cikitsā*) There is no (need of the) examination of the diseases, the vitiations or the vitiated (entities). There is no need to consider (the factors of) the region (of the patient), of the time (of administration or the stage of the disease), if medication is by means of elixirs. By those who understand the principle here, this is desired in all curable diseases; (and,) the elixir is to be given even in incurable (diseases). Hence, elixir is considered as *the esteemable*. Because it is to be given in small doses, and there is no question of any distastefulness (here) and as it affords health quickly, elixir is greater than the drugs. Rasendrasarasamgraha.

63. वयः स्थापनं वर्ष शतमायुः स्थापनम्। आयुष्करं शताधिकमपि करोति। अन्ये तु वयः स्थापनं जरापहरणं तारुण्यं बहुकालं स्थापयति।

(*elixirs and geriatrics*): Fixation of age is stabilisation of the span of life for a hundred years. That (measure) which gives life makes a person live for more than even hundred years. Others consider (that by) elixirisation is meant removal of age and stabilisation of the youthfulness for a long time (in the life of the person). Da.

गर्भ बाल कुमाराख्यं इत्येतत् त्रिविधं वयः। यौवनं मध्यमं वृद्धतश्च त्रिविधं पुनः।।

(*stages in age* :) Foetus, infant and boy - age is thus of three kinds. Three again it is, such as youth, adulthood or the mid-age and the old. Kasyapa.

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वर्षावरः क्षीरपः स्याद् यावत् पिबति वा पयः ।
वयस्तद् बालमस्माच्च यावत् षोडश वार्षिकः ।।
अन्नादः सर्व एव स्यात् कौमारे वयसि स्थितः ।

Till one year or as long as he keeps drinking milk, he is a milk drinking infant. From that age, till he becomes sixteen years, he is a boy, eating rice. From then on, he is called a youth till thirty four years, prospering as he is with the thriving of the body constituents, psychic power, strength, virility and prowess. Kashyapa.

मध्यंतु नः समत्वागतबलवीर्य पौरुष पराक्रमग्रहण धारणस्मरणवचनविज्ञान सर्वधातु गुणं बलस्थितं अवस्थित सत्वमविशीर्यमाण धातुगुणं पित्त धातु प्रायमाषष्टिवर्षमुपदिष्टम् ।।

From then on till sixty years he is considered middle-aged. Here, (his) strength, virility, prowess, manliness, retentivity, recollectivity, speaking efficiency, professional expertise, the qualities of all the body constituents, have (all) reached a stage of full development (lit. an evenness, or a plateau state); (he is now) stablished in (his) strength, settled in (his) psychic capabilities and non-degenerative in (his) qualities of the body constituents; he is predominantly of *pitta* constituents. Caraka.

अतः परं हीयमान धात्विन्द्रिय बलवीर्य पौरुष पराक्रम ग्रहण धारण स्मरण विज्ञानं भ्रश्यमान धातु गुणं वायु धातु प्रायं क्रमेण जीर्णमुच्यते आवर्ष शतम् ।

From then on he is called old, (this is after seventy years in Susruta and Vagbhata), his body constituents, sensory faculties, strength, virility, manliness, prowess, (capacities of) grasping, retention, recollection, efficiency in-speech and professional expertise - all getting weak and defective, qualities of the body constituents becoming deviant and gradually (the body itself) becoming predominantly of *vāta* constituents. Caraka.

पश्येम शरदः शतं जीवेम शरदः शतं श्रुणुयाम शरदः शतं प्रब्रवाम शरदः शतं अदीनाः स्याम शरदः शतं भूयश्च शरदः शतात् ।

Let us see for hundred autumns, live for hundred autumns, hear for hundred autumns, be speaking for hundred years, be non-miserable for hundred years; (why, this much alone), let all this be so, for more than hundred years. Yajurveda. (*a vedic prayer for longevity*)

पथ्याशिनां शीलवतां नराणां
सद्वृत्त भाजां विजितेन्द्रियाणाम् ।
एवं विधानामिदमायुरेव
सत्यं भवेत् वृद्धमुनिप्रणीतम् ।।

It is for those that eat what is salutary, have a good character and lead a good livelihood and are restrained in their senses - for people of this type only, the life (of hundred years) that the sages speak about is meant. Sārāvali.

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64. अचिन्त्यादद्भुत प्रभावमायुष्यमारोग्यकरं वयसः स्थापनं निद्रातन्द्रा श्रमक्लमालस्यदौर्बल्यापहरं अनिल कफ पित्तसाम्यकरं स्थैर्यकरं अबद्ध मांसहरं अन्तरग्निसन्धुक्षणं प्रभावर्ण स्वरोत्तमकरं रसायन विधानम्।

(*some details* :) Procedure of elixirisation is possessed of inconceivably wonderful possibilities, being - promotive of longevity and health; preservative of youth; dispersive of somnolence, torpor, fatigue, exhaustion, indolence and weakness; restorative of the balance of *vāta, pitta* and *kapha*; stabilising; curative of flabbiness of flesh; stimulative of the internal gastric fire; (and) promotive of lustre, complexion and voice. Cs. ci. 1. 2nd pada. 3.

यथाऽमराणाममृतं यथा भोगवतां सुधा। तथाऽभवन् महर्षीणाम् रसायन विधिः पुरा।।
न जरां न च दौर्बल्यं नातुर्यं निधनं न च। जग्मुर्वर्षसहस्राणि रसायनपराः पुरा।।
न केवल दीर्घमिहायुरश्नुते रसायनं यो विधिवन्निषेवते।
गतिं सदेवर्षिनिषेवितां शुभां प्रपद्यते ब्रह्म तथेति चाक्षयम्।।

As is ambrosia to the immortal gods and nectar to the serpents so in the days of yore, was the methodology of vitalisation to the great sages. Those sages of the olden days, the votaries of elixirs, lived for thousands of years, transcending old age, infirmity, disease and even death. He who makes use of *rasāyana* in the prescribed manner, not merely attains longevity on the earth but after death goes by the auspicious way of the divine sages and reaches the immutatble Brahman itself. Cs. ci. 1st pada 1.78-80.

तपसा ब्रह्मचर्येण ध्यानेन प्रशमेन च। रसायन विधानेन कालयुक्तेन चायुषा।
स्थिता महर्षयः पूर्वं न हि किंचिद्रसायनम्। ग्राम्यानामन्यकार्याणां सिध्यति अप्रयतात्मनाम्।।

In penance, celebacy, contemplation and tranquility lived for a long time the sages in the past by the methods of elixirisation. No elixirisation becomes successful to persons of sophisticated life engaged in other (mundane) activities and who have not striven to understand *atma*. Cs. ci. 1.3.7.

समर्थानामरोगाणां धीमतां नियतात्मनाम्। कुटीप्रवेशः क्षणिनां परिच्छदवतां हितः। अतोऽन्यथा तु ये तेषां सौर्यमारुतिको विधिः। तयोः श्रेष्ठतरः पूर्वो विधिः स तु दुष्करः।

Indoor management within a specially made cottage is salubrious to persons who are capable, healthy and disease- free, intelligent, self-controlled, and have enough time and persons to attend upon. Out-door management in accordance with the sun and the air prevailing, is the method to be adopted in the case of persons other than these. Of these two, it is the former that is better, but, it is difficult. Ca. ci. 1.4.27-28.

अथातः स्वभाव व्याधिप्रतिषेधनीयं रसायनं व्याख्यास्यामः।
ब्रह्मोदयोऽसृजन् पूर्वममृतं सोम संज्ञितम्। जरामृत्यु विनाशाय विधानं तस्य वक्ष्यते।

We shall now comment upon the elixirisation that would ward of the natural disease (such as old age). In the ancient times, Brahma and the others created an ambrosia called *soma* in order to destroy old age and death. Its methodlogy is told about here. (Then is described thirty four varieties of *soma* plants, whose botanical

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identification is still eluding; all were used as elixirs according to the methods specified in much detail) Ss. ci. 29.1-3.

अथातो निवृत्त सन्तापीयं रसायनं व्याख्यास्यामः ।

There is another kind of elixir called *nivṛttasantāpīya* that would remove distress and fatigue; we comment upon it henceforth.

यथा निवृत्त सन्तापा मोदन्ते दिवि देवताः । तथौषधीरिमाः प्राप्य मोदन्ते भुवि मानवाः ।

By securing these drugs, men live enjoying in this world as gods do in the heavens, free from fatigue and distress. Ss. ci. 30.3 (a very long list of these plants are then given).

अथ खलु सप्त पुरुषा रसायनं नोपयुंजीरन्; तद्यथा-अनात्मवानलसो दरिद्रः प्रमादी व्यसनी पापकृत् भेषजापमानी चेति। सप्तभिरेव कारणैर्न संपद्यतेः तद्यथा-अज्ञानादनारम्भादस्थिर चित्तत्वातत् दारिद्यादनायत्तत्वाद धर्मादौषधालाभाच्चेति।

The following seven kinds of persons should not use any elixirative measures; those who have not realised the soul within themselves, the lazy, the poor, the person who is error-prone, or who is addicted to vices, the sinner and those who dishonour medicine. Persons, even if they use, will not secure the attributed results) because of the following seven reasons: ignorance (of the details), non-commencement (of the procedure), unsteady mindedness, poverty (i.e. lack of wealth for persisting in the procedure for the required period and in the required way), not following to the end of the period, *adharma* or lack of a particular drug component. Ss. ci. 30.4.

1. *adages*

65. शस्त्रे सुरक्षति शस्त्र चिन्ता प्रवर्तता।

(*peace of the society and scientific work*) The thinkings of the Technical treatises issue forth when (the country) stays (well) protected by the weapons (and the army).

66. आचार्यात्पादमाधत्ते पादं शिष्यः स्वमेधया। पादं सब्रह्मचारिभ्यः पादं कालक्रमेण तु।।

(*learning*) A disciple learns one quarter from his teacher, one-quarter from his own brilliance of the mind, one quarter from his co-students and (the remaining) one quarter, however, in course of time. Dṛṣṭānta śataka

67. प्रमादोऽनवधानता।

(*expertise*) Error is inattention. Amarakośa.

उपायसन्दर्शनजां च सिद्धमपायसन्दर्शनजामसिद्धम्।
मेधाविनो नीतिविदः प्रयुक्ताः पुरः स्फुरन्तीमिव दर्शयन्ति।।

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The intelligent experts employ the measures visualising both the success of a strategem (they employ) as will as the (possible) failures thereof, even beforehand itself, as if in a flash as it were. Pancatantra.

68. सुहृदा विक्षिपन्त्याशु कथाभिर्वर्णविदनाः । आश्वासयन्तो बहुशस्तु अनुकूलाः प्रियंवदा ।।

(*the therapeutic value of friendliness*) Friends immediately dispel away the pain of the wounds by their narrations and stories, as they console (the patient) in many ways and by pleasing and beneficial talk. Susruta.

सुहृदस्तु स्वयं दुःखिना अपि विस्मृत्य आत्मदुःखं सुहृद्दुःखापनोदायैव यतन्ते ।

A good friend is one who though himself is saul, forgets his own grief and takes effort for the removal of the grief of his friends. Kadambari.

अप्रियाण्यपि पथ्यानि ये वदन्ति नृणामिह । त एव सुहृदः प्रोक्ता अन्येस्युर्नामधारकाः ।।

He who tells what are salutary, even though they are unpleasant, he alone is called a friend. Others are merely the name-bearers (as friends). Pancatantra.

न च भार्यासमं किंचित् विद्यते भिषजां मतम् । औषधं सर्वदुःखेषु सत्यमेतद् ब्रवीमि ते ।।

There is nothing equal to a wife. This is the opinion of the physicians. She is the medicine in all kinds of grief. This is the truth I am teling you. Mahabharata.

69. विविधं दुःखम् आदधाति इति व्याधिः ।

(*disease*) As this brings about various kinds of grief (*ādhi*), it is caled a disease (*vyādhi*).

विकारः बुद्धि इन्द्रिय मनः शरीराणामन्यथात्वम् । दुःखं सर्वेषां प्रतिकूलतया वेदनीयं दुःखम् ।

Disorder is an aberration or an other than natural state of intellect, sense faculties, mind and the body. Grief is to sense every thing as unfavourable. Tarka samgraha.

Feeling everything as disadvantageous is grief. Tarka samgraha.

रोगस्तु दोषवैषम्यम् ।

Disease is an unevenness or a non-equability of the vitiations. A.hr.

द्विविधो जायते व्याधिः शारीरो मानसस्तथा । परस्परं तयोर्जन्म निर्द्वन्द्वं नोपलक्ष्यते ।।
शारीरात् जायते व्याधिः मानसो नात्र संशयः । मानसात् जायते व्याधिः शारीर इति निश्चयः ।।

Two kinds of disease arise, somatic (lit. physical) and mental. Their birth is mutually dependent; they are never seen to be nondual. From the somatic arises the mental - there is no doubt about it. It is definite that from the mental arises the somatic. Mahabharata.

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अधिष्ठान द्वयं तेषां शरीरं मन एव च। आधयो मानसास्तत्र शारीरा व्याधयः स्मृताः। निर्द्वन्द्वं नोपलक्ष्यते।

Their (i.e. of the diseases) substratum is two fold, body and mind, the mental are (called) the *ādhi*, the somatic are considered the *vyādhi*. Kasyapa. There is no (disease) which is not based on both.

70. सर्व एव निजा विकारा नान्यत्र वातपित्तकफेभ्यो निर्वर्तन्ते यथा हि शकुनिः सर्वं दिवसमपि परिपतन् स्वां छ्यां नातिवर्तते तथा स्वधातुवैषम्य निमित्ताः सर्वे विकारा वातपित्तकफान्नातिवर्तते। वात पित्त श्लेष्माणां पुनः स्थान संस्थान प्रकृति विशेषानभिसमीक्ष्य तदात्मकानपि च सर्वविकारान् तानेव उपदिशन्ति बुद्धिमन्तः।

(*the invitability of tridosa*) All the endogenous disorders (born within the body) do not transgress the (three factors of vitiation), *vāta, pitta* and *kapha*. Just as a bird flying here and there throughout the day would never transgress its own shadow, so do the disorders that are (ultimately) due to an imbalance of its own constituents never transgress *vāta, pitta* and *kapha* and, even the exogenous disorders, originating first according to their (particular) previous history, would later on bring about an imbalance among *vāta, pitta* and *kapha*. Cs. su. 80. 19.5.

71. सत्वमुच्यते मनः। तच्छरीरस्य तन्त्रकमात्मसंयोगात्। सत्वावजयः पुनरहितेभ्योऽर्थेभ्यो मनो निग्रहः।

(*mind and its control*) The real essence of man is called mind (*satva*). This is the loom of the body when it gets coupled with soul. Victory over this *satva* is the restraining of the mind from (going after) unwholesome objectives. Caraka.

आत्मानं रथिनं विद्धि शरीरं रथामेव तु। बुद्धिं तु सारथिं विद्धि मनः प्रग्रहमेव च।।
इन्द्रियाणि हयान्याहुर्विषयांस्तेषु गोचरान्। आत्मेन्द्रियमनोयुक्तं भोक्तेत्याहुर्मनीषिणः।।
यस्तु विज्ञानवान् भवति युक्तेन मनसा सदा। तस्येन्द्रियाणि वश्यानि सदश्वा इव सारथेः।।

Know the soul to be the master sitting in the chariot and the body, to be the chariot. Know that intellect is the charioteer and mind is the briddle-thong. Sense organs are called the horses, sense- objectives the path lying in the range of their access (lit. progress). The wise say that the soul accompanied with the sense organs and mind is the enjoyer. He who becomes wise (and has) his mind always under control, his senses are also under control like the good horses that stay within the control of the charioteer. Kathopanisad.

तरवोऽपि हि जीवन्ति जीवन्ति मृगपक्षिणः। सजीवति मनो यस्य मननेन उपजीवति।।

Even the tress (manage to) live (and so do) live the beasts and the birds. (But, of what use is this for a man living this way just vegetatively?) He only lives who carries on his life by (constant) deliberations through his mind (and thus controlling himself throughout). Yogavāsiṣṭa.

मानसं प्राणिनामेव सकर्मैककारणम्। मनोनुरूपं वाच्यं च वाक्येन प्रस्फुटं मनः।।

Mind is the sole reason for the activities of all human beings. (Their) speech is in confirmity with the mind and the mind gets manifested explicitly by the utterances (of speech). Nārada Pancarātra.

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अकारैरिङ्गितैर्गत्या चेष्टया भाषितेन च। नेत्रवक्त्रविकारैश्च गृह्यते अन्तर्गतं मनः ।।

The internal mind (of a person) gets (easily) grasped by (facial) form, intention, gait, gesticulation, speech or the distortions in the eyes and the face. Manu.

बाह्यैर्विभावयेल्लिंगैर्भावमन्तर्गतं नृणाम्। स्वरवर्णेङ्गिताकारैश्चक्षुषा चेष्टितेन च।।

The inner feelings of man are to be ascertained by external signs such as the (corresponding) appearances of the (quality of the) voice, the colour, the intention or the (distortions of the) eyes and the gesticulations. Manu.

आकारश्छाद्यमानोऽपि न शक्यो विनिगूहितुम्। बलाद्धि विवृणोत्येव भावमन्तर्गतं नृणाम्।।

Even if it is being attempted to be covered over, it is not possible to hide it down completely; the inner feelings of men compulsively get exposed. Ramayana.

अपश्यन् काष्ठ रन्ध्रस्थ वृषणाक्रमणं यथा।
कीलोत्पाटी कपिर्दुःखमेतीदं हि तथा मनः ।।

As a monkey engaged in rooting out the wedge, not seeing its own scrotal sacs being gradually overcome (thereby) as they are already lying within the slit of a sliced piece of wood, finally comes to grief, so does the mind (come to grief, by engaging itself in some uselesswork or the other). Yogavasista.

मनः प्रमादाद् वर्धन्ते दुःखानि गिरिकूटवत्। तद् वशादेव नश्यन्ति सूर्यस्याग्रे हिमं यथा।।

It is by the error of the mind that the griefs flourish forth like the peak of a mountain. It is by its own control they get destroyed as the snow melts before the sun. Yogavāsiṣṭa.

संसारस्यास्य दुःखस्य सर्वोपद्रव दायिनः। उपाय एक एवास्ति मनसः स्वस्य निग्रहः ।।

For the grief of this mundane world that leads to all types of irritations, there is only one strategy. (This is:) for the mind to control itself. Yogavāsiṣṭa:

मनोहि जगतांकर्तृ मनो हि पुरूषः परः। मनःकृतंकृतं लोके न शरीरकृतं कृतम्।।

Mind is the creator of the world. Mind is the supreme person. What is done by the mind, that alone is done in this world. What is done by the body is not what is done, at all, Yogavasista.

72. श्रोत्रियो नृपतिर्वृद्धो नदी वैद्यंच पंचमः। पंच यत्र विद्यन्ते न वासस्तत्र कारयेत्।।

(*physicians*) The five, viz., a learned brahmin, a king, an old man and a physician – where these five are not available, one should never make his dwelling there. Mahabhārata.

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वैद्यकस्तर्कविहीनो निर्लज्जा कुलवधूर्यतिर्मूखः । कटके च प्राहुणिको मस्तक शूलानि चत्वारि ।।

A physician without logic, a shameless house-wife, a stupid sage and a guest of the house - these four are the head-aches.

राक्षसी मानुषी दैवी चिकित्सा त्रिविधा मता । शस्त्रैः कषायैर्लोहाद्यैः क्रमेणान्त्याः सुपूजिताः ।।

Demonaical, human and divine - medicine is thus considered to be of three categories - (carried out respectively) by surgery, decoctives and metallic preparations. Of these, the latter are gradually more respected. - Bhaisajya ratnavali.

अधमः शस्त्रदाहाभ्यां मध्यमो मूलकादिभिः ।
उत्तमो रसवैद्यस्तु सिद्धवैद्यस्तु मान्त्रिकः ।।

Despicable is the medical treatment carried out by means of surgical instruments and cauterisation; of medium merit is that (carried out) by means of roots and the like; a physician employing mercurial preparations is however the best. He who treats by incantations is the most accomplished physician.

यस्य कस्य तरोर्मूलं येन केनापि घर्षितम् ।
यस्मै कस्मै प्रदातव्यं यद्व तद्व भविष्यति ।।

(*quack's method*) The root of some tree or the other, rubbed and mixed with some thing or the other is to be administered to someone or the other. By this way, something or the other will happen this way or the other. Laṭakamelaka.

वैद्यराज नमस्तुभ्यं यमराज सहोदर । यमस्तु हरते प्राणान् वैद्यः प्राणान् धनानि च ।।

Salutations to thee, O king of the physicians, the brother of the Lord of Death, Yama. Yama robs only the life but this physician would rob life as well as money. Subhāṣitāvalī.

चितां प्रज्वलितां दृष्ट्वा वैद्यो विस्मयमागतः । नाहंगतो न मे भ्राता कस्येदं हस्त लाघवम् ।।

Seeing the bier lit (in the cremation ground), the physician gets a surprise. "Neither have I gone here, nor my brother. Then, whose handicraft is this?"

न प्राणिरहितो देशो न च प्राणी निरामयः । तस्मात् सर्वत्र भिषजां कल्पिता एव वृत्तयः ।।

There is no region where there are no beings. There is no being, completely disease free. That is why, the profession of physicians already exists readymade, everywhere. Rasaratna samuccaya.

तक्षा रिष्टं रुतं भिषक् ब्रह्मा सुन्वन्तं इच्छति ।

A carpenter is on the look out for the damaged furniture: a physician, for the disease stricken (patient) and brahma (a sacrifical priest) for one who desires to carry out a sacrifice. Rgveda.

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स्वस्थैरसाध्यरोगैश्च जन्तुभिर्नास्ति किंचन।
कातरा दीर्घ रोगाश्च भिषजां भाग्यहेतवः ।।

There is no use whatsoever for physicians by the healthy and the patients stricken with incurable diseases. Those who are tense and anxious (because of the disease that has stricken them) and those who are afflicted with chronic diseases – these constitute the causes for their fortune.

वैद्यानां शारदी माता पिता च कुसुमाकरः। यमदंष्ट्रा स्वसा प्रोक्ता हित भुक् मित भुक् रिपुः ।।
(यमदंष्ट्रा-कार्तिकस्य दिनान्यष्टावग्रहायणस्य च। यमदंष्ट्रा समाख्याता स्वल्प भुक्तो हि जीवति)

Autumn (when there is an outburst of various afflictions) is the mother of the physicians; spring (when again there usually occurs another such outburst), the father and the time of the jaws of the Lord of Death (viz., the eight days of Kārtika month and the eight days of the Agrahayāna month – when only one who eats in small quantity, lives – Sarngadhara), the sister and he who eats the wholesome food within the limited measure, the enemy,

कष्टं जीवति गणिका गणकोऽपि च राजसेवको वैद्यः। दिवसे दिवसे मरणं परस्य यच्चित्तरंजनं वृत्तिः ।।

A prostitute lives in a difficult way; so does an astrologer, a royal servant and the physician, as they face death day in and day out (since) their professional life is to please the mind of others.

प्रत्यक्षं कविकाव्यं च रूपं च कुलयोषितः। गृहवैद्यस्य विद्या च कस्मैचित् यदि रोचते।।

The poetry of a poet who is alive and can be seen directly, the beauty of one's own wife and the learning of the physician of one's own house – these please only a very rare few, if at all.

अपि धन्वन्तरिवैद्यः किं करोति गतायुषि।

If the very span of life(of the patient) is already over, what can even Dhanvantari physician do? Hitopadesa.

न हि अलं ज्ञानवान् भिषङ्. मुमूर्षुरातुरमुत्थापयितुम्।

Even a highly knowledgeable physician is not enough to raise up the patient who is about to die. Caraka.

मंत्रिणां भिन्न सन्धाने भिषजां सान्निपातिके। कर्माणि व्यज्यते प्रज्ञा सुस्थे को वा न पण्डितः ।।

The wisdom in action of the ministers gets tested out at the time of the breakdown of conciliatory efforts; of the physicians, at the outbreak of a disease due to the synergesis of many factors. Who is not an expert when everything is normal? Hitopadesa.

यत्रौषधीः समग्मत राजानः समताविव।
विप्रः स उच्यते भिषग् रक्षोहाऽमीव चातनः ।

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As kings (administer) with the assistance of his (members of the) Committee so does the Brahmin along with the assistance of his herbs do and destroy the demons (responsible for the diseases and quietens the diseases) – he is called a physician. Rgveda.

कुचेलः कर्कशः स्तब्धः कुग्रामी स्वयमागतः। पंचवैद्या न पूज्यन्ते धन्वन्तरिसमा अपि।।

Ill-dressed, the harsh (in speech and behaviour), the silent and the inert, one who comes from a inconspicuous village and one who comes unasked – these five kinds of physicians are never respected, even if they are like the very Dhanvantari (the lord of the physicians).

73. तत्र नाना रुजा क्रान्त शरीराणां। क्षीणानां दुर्बलाग्निनां भेषज द्वेषिणामपि।।
स्वादुत्वात् स्वल्प मात्रत्वात् लघु पाकतयाऽपि च। अत्युग्रतर वीर्यत्वात् लोहमेव प्रशस्यते।।

(therapeutic value of metallic preparations:) Therein, for living beings with bodies overcome with various diseases, the emaciated and those that have weak digestive power and even those who hate (taking) medicines, metallic (preparations) alone are extolled because of their tastiness, small dosage, easy (lit. light) assimilability and very violent potency. Lohapaddhati: (a treatise on medical use of iron and its preparations) by Suresvara (also the author on Vṛkṣāyurveda) MS. 193 B.D. 285 Asiatic Society, Bombay.

74. हरीतकी मनुष्याणां मातेव हितकारिणी। कदाचित्कुप्यते माता नोदरस्था हरीतकी।।

(some clinical hints) Haritaki (or, the fruit of *Terminalia myrobolans*) is benefit confering like a mother to a man. it is likely that a mother may get angry (and thus do harm) but not the Terminalia fruit within the stomach.

अमन्त्रमक्षरं नास्ति नास्ति मूलमनौषधम्। अयोग्यः पुरुषो नास्ति योजकस्तत्र दुर्लभः।।

There is no letter that cannot be used in an incantation. There is no root which is not a medicine. There is no person who is unfit. It is the (proper) employer (of all these) that is difficult to come by. Bhirtrhari.

प्रज्ञया मानसं दुःखं हन्यात् शरीरमौषधैः। एतत् विज्ञानसामर्थ्यं न बालैः समतामियात्।।

By wisdom one should destroy the griefs of the mind and the body, with the help of the drugs. This does lie within the capacity of the science (of Ayurveda); one should not keep suffering like an (ignorant) child. Mahābhārata.

जिह्वे प्रमाणं जानीहि भोजने भाषणेऽपि च।
अति भुक्तिरतीवोक्तिः सद्यः प्राणापहारिणी।।

O tongue, note the proportions and limitations, in eating as well as even in speaking. Too much of eating and too much of speaking are both instantly fatal.

विष अमृतयोराकरी जिह्वा।

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Tongue is the mine for poison as well as nectar. Canakyasutra.

विषदिग्धस्य भक्तस्य दन्तस्य दलितस्य च। अमात्यस्य च दुष्टस्य मूलादुद्धरणं सुखम्।।

As regards the food that is poisoned, a tooth that has become loosened and a minister who is wicked, it is comfortable if these (three) are eradicated out, from the very roots. 6. Hitopadesa 405.

शयनं पित्तनाशाय वात नाशाय मर्दनम्। वमनं कफनाशाय ज्वर नाशाय लंघनम्।।

Sleeping is (the best) for destroying the *pitta* vitiation; massaging – for destroying the *vāta* vitiation; vomiting – for destroying the *kapha* vitiation, and fasting – for destroying fever.

तक्रं रुचिकरं वहनि दीपनं पाचनं परम्। उदरे ये गदास्तेषां नाशनं तृप्तिकारकम्।।

Buttermilk is appetising, stimulative of the gastric fire, the great digestive, a destroyer of whatever ailments are there in the belly and satisfying. Ksemakutuhala.

न तक्र सेवी व्यथते कदाचित् न तक्रदग्धा प्रभवन्ति रोगाः।
यथा सुराणां अमृतं प्रधानं तथा नराणां भुवि तक्रमाहुः।।

One who makes it a habit of taking buttermilk will never come to grief. Diseases burnt out by buttermilk do not originate again. As *sura* is priomordial for the gods in the heavens, so is said to be the buttemilk for men in this world.

प्रायेण धीमतां लोके भोक्तुं शक्तिर्न विद्यते। काष्ठान्यपि जीर्यन्ते दरिद्राणां च सर्वशः।।

Probably, there is no power for enjoyment in the wealthy. (But) even dry wood gets digested everywhere by the poor. Mahabharata.

शक्तिं करोति संचारे शीतोष्णे मर्षयत्यपि। दीपयत्युदरे वह्निं दारिद्र्यं परमौषधम्।।

It creates energy in moving from place to place,even if cold and heat press one down. It enkindles the digestive fire in the stomach. Poverty is thus a supreme medicine.

हे दारिद्र्य नमस्तुभ्यं सिद्धोऽहं त्वत्प्रसादतः। पश्याम्यहं जगत्सर्वं न मां पश्यति कश्चन।।

Salutations to you, O poverty. I have become an accomplished Siddha because of your grace. (For,) I am seeing the whole world but no body sees me.

हरीतकी मनुष्याणां मातेव हितकारिणी। कदाचित्कुप्यते माता नोदरस्था हरीतकी।।

The myrobalans is beneficial to men like the mother. it is likely that mother may get angry but never does the myrobalans once taken into the stomach. Navanitaka.

अल्पमात्रोपयोगित्वादरूचेरप्रसंगतः। क्षिप्रमारोग्य दायित्वादौषधिभ्योऽधिको रसः।।

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Mercury (preparations) is of greater merit than (all other) medicines as it can be used in small quantity; there is no possibility of there arising a distaste at the time of taking it or even, afterwards and as it confers health quickly. Resaratna samuccaya. 375.

विकारेऽल्पे महत्कर्म क्रिया लघ्वी महागदे। द्वयमेतदकौशल्यं कौशल्यं युक्तकर्मता।।

To carry out a great medication, when the disease is of a small extent, or to carry out a feeble medication when the disease is great - both constitute an inexpertise. Expertise lies in performing exactly appropriate medication. Vṛnda mādhava.

विगतक्लम संतापमव्यथं विमलेन्द्रियम्। युक्तं प्रकृति सत्वेन विद्यात् पुरुषमज्वरम्।।

(*sign of fever having disappeared*) Becoming bereft of tiredness and the too much heat, non-distress, all sensory faculties clearing up and coming back to his normal status - (such a person) should be known as free from fever. Ca. ci. 3. 329.

ऋण शेषं व्याधि शेषं च अग्निशेषं तथैव च। पुनः पुनः प्रवर्धन्ते तस्मात् शेषं न कारयेत्।।

The residue of debt, the residue of disease and similarly the residue of fire, would again and again thrive forth. Therefore one should not leave any residue (whatsoever of these). Cānakya śataka.

एकं शास्त्रमधीयानो न गच्छेच्छास्त्रनिश्चयम्। तस्मात् संलग्न शास्त्रेषु तर्क बुद्ध्यावगाह्यताम्।।

He who studies only one science, will not secure the determinative end of it. Therefore he should enter into an understanding of other associated sciences as well by logical comprehension. Agastyasamhita.

देवे तीर्थे द्विजे मन्त्रे दैवज्ञे भेषजे गुरौ। यादृशी भावना यस्य सिद्धि र्भवति तादृशी।।

In God, a holy place, a brahmin, an incantation, an astrologer, a physician and a preceptor, the achievement is in accordance with the faith. Pancatantra.

यावदुच्छ्वसिति प्राणी यावद् भैषजमत्ति च। तावत् चिकित्सा कर्तव्या दैवस्य कुटिला गतिः।।

(*a final advice?*) As long as a person continues to breathe and as long as he is able to take (lit. eat) medicine, so long should the medical treatment continue for, the course of fate is (very) deviant. Rasaratnasamuccaya. 438.

शरीरे जर्जरी भूते व्याधिग्रस्ते कलेवरे। औषधं जाह्नवी तोयं वैद्यो नारायणो हरिः।।

When the body is tottering down and the whole person (of the patient) is in the grip of the disease, Ganga water is the medicine, and God narayana is the physician. 441.

उचितो यस्य यो देशस्तज्जं तस्यौषधं हितम्। देशेऽन्यत्रापि वसतस्तत्तुल्य गुण जन्म च।।

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Whatever is a geographical region to which a person is acclamatised, a medicine born in that region or any other medicine which has a quality and origin similar to it is wholesome to him, even if he is (presently staying) in a different region. A samg.

विचारात् तीक्ष्णतामेत्य धीः पश्यति परं पदम्। दीर्घसंसार रोगस्य विचारो हि महौषधम्।।

Intellect perceives the supreme state after becoming acute by deep consideration and thinking. For the long fever of mundane life it is such a deep consideration and thinking indeed that constitutes the great medicine. Yogavasistha.

सर्वस्याः सरितो वारि प्रयात्यायाति चाकरात्। देहनद्याः पयस्त्वायुर्यात्येवायाति नो पुनः।।

For all the rivers,water flows on and comes back again from the reservoir. For this river of the (human) body, its water which is the span of life just flows on. There is no coming back for it again. Yogavasistha.

नन्दत्युदित आदित्ये नन्दत्यस्तमितेऽहनि। आत्मनौ नावबुद्ध्यन्ते मनुष्या जीवित क्षयम्।।

When sun rises, a person becomes delighted. He gets delighted when the day has disappeared. But, he does not recognise, the decline of his own life (in this cycle of day and night). Ramayana.

बाल्यं वृद्धि श्छ्यविर्मेधा त्वक् दृष्टिः शुक्रविक्रमौ। वृद्धिः कर्मेन्द्रियं चेतो जीवितं दशतो हरेत्।।

Child-hood in tenth year, (physical) growth in twenty years, the splendour and lustre of life till thirty years, intellectual brilliance in forty years, (firmness of the) skin in fifty years, (power of) sight in sixty years, intelligence in ninety years, movement of limbs in hundred years and the animatedness in hundred and ten yeas – thus the life gets worn out in terms of ten years (at every stage). Sharngadhara.

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14. Pharmacology and Pharmacognosy

A. *Pharmacology*

1. न तु केवलं गुणप्रभावादेव द्रव्याणि कार्मुकाणि भवन्तिः द्रव्याणि हि द्रव्यप्रभावाद् गुणप्रभावाद् द्रव्य गुण प्रभावाच्य तस्मिन् तस्मिन् काले तत्तधिकरणमासाद्य तांतांच युक्तिमर्थं च तमभिप्रेत्य यत् कर्वुन्ति तत् कर्म येन कुर्वन्ति तद्वीर्यं यत्र कुर्वन्ति तदधिकरणं यदा कुर्वन्ति स कालः यथा कुर्वन्ति स उपायः यत् साधयन्ति तत् फलम्।।

The drug materials do not become (the trouble shooting) bows(that they are), solely because of the power of their quality. Indeed, they do so by the power of their physical nature or the quality or by both together. (Moreover), they do so (only) in a specific time and after having reached a specific substratum (i.e. target site). (It is only then that) they become intent (*abhipretya*) on adopting a specific stratagem of action to bring about a specific final result (viz., the time, the target site, the stratagem and the final therapeutic result - all of threse vary from drug to drug specifically). In fact, what these materials do (in these several ways and controlled by these several factors) is the drug action, in which manner is that done, is the potency, where this is done is the target site, when they do so, is the time of action, how they do so is the stratagem and what they accomplish is the final fruit. Caraka Samhita. Su. 26. 13.

(Caraka is a better source for discussing the knowledge in those times, of the drug action as this picturesque quotation clarifies. Evidently, at the time when this statement was made, the climate of the knowledge had recognised such concepts in drug action or pharmaco kinetics as its diversities and specificities in target site, time of action, strategum in the body and the therapeutic result. It is the business of the modern science of Pharmacology now to exaplain the infinite details involved here at various levels in its own terms).

a. *some general remarks*

(1). It is in the sections on Pharmacology or the explanation to drug action that the reputed, ancient Samhitas of Ayurveda assume undoubted and topical interest. This is because they furnish us with the original principles on which the medicinal values of specially the plant drugs were presumed and probably first promulgated, derived, explained or understood.

The administration of the drugs is wholly oral in Ayurveda. Excepting in *basti* or enema (where the entry is rectal, occular and so on) or the fumigatories and errhinies (where the entry is nasal), direct penetration of the drug into the blood stream through something like an injection of the modern times was probably not known, though some type of injecting as such through a mechanical device was practised in niruhaṇa basti (i.e. non-oily enema) where however the drug does not reach the blood stream. The nearest analogy is in scarification followed by application of the ointments. The action of these drugs as explained is therefore

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mostly like those of the food substances themselves. This is essentially post-digestive excepting in the cases of those that act within the digestive system itself physicially for e.g. by means of their mass or lubrication as in the purgatives.

Quite often the physician himself was the preparer of the drugs, at least in the past. The drugs were applied singly or in various combinations and pharmaceutical forms, whose details as well as dosage are also always given. A modern researcher who would like to adjudge the principal value of the drug materials mentioned in any specific author like Susruta should take into consideration this data also before he refutes or confirms. Only then the full concept of the original author would be revealed.

2. The modern pharmacologist's idea of the presence of an active principle in a drug material because of which alone the material concerned is a medicinal *dravya* (the crude drug) is just tacitly assumed by the ancient authors. So also the concept of the target organ or rather, the target therapeutic function. At the stage of the science of Chemistry then in vogue, no further hint towards any specific chemicals occurs anywhere.

The action of any drug (vegetable, animal or mineral) in the human body is exaplained wholly on five broad factors - 1. *dravya*, the physical nature of the drug material as such, 2. *rasa*, the taste, 3. *guṇa*, the quality, 4. *vīrya*, the potency and 5. *vipāka*, the post-assimilative effect. This corresponds to the concept that a drug can act respectively by its physical consistency, taste, quality, potency or post-assimilative effect. In fact these ideas also constitute the present day concept of drug action or the pharmacokinetics. What is the final physical basis - or the molecular structure as a modern scientist would like to talk about, for these principles of action, i.e., quality, potency, etc., in any drug one selects is a wholly different question. But all these five concepts as such are well acclaimed now as well as then. Even in modern pharmacology, the action of the drug is explained in terms of its physical property (light or heavy, lubricative, etc.), quality (acidic, alkaline etc.), potency (quick, virulent, active in very small doses etc.) post-assimilative effect (the final product in the body after assimilation) and special or unique effect (as in reserpine). The addition that is made here is: that the action is always sought to be traced to some - preferably a single chemical (the active principle) and its interactions at the molecular level. Such a molecular level of study can be undertaken to any ayurvedic drug just as is being sought out to many of the drugs of modern pharmacy whose pharmacodynamics is not known as yet.

It is only the *rasa* factor and the great value the ayurvedists attach to it that seems difficult for a modern reader to appreciate. That is why we present below the discussion of it in the words of Susruta himself. The discussion with which the Chapter on drug action commences is posed around a question as to which of the above five factors is of greater importance. The spirit of the discussion as well as the conclusion Suśruta comes to on such an explicitly stated discussion at the end are both worth watching. Instances of such discussions are very few in the Text, where, what we meet with are mainly the settled and finalised conclusions and not the arguments on which they are based. The discussion here illustrates the logic behind and in addition constitutes the best clue that Suśruta had before him a considerable amount of previous liteature and knowledge which he attempted to evaluate most appropriately, resulting in the *Samhita* or the compilation that we now have.

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b. *principles of drug action*
(i) *some basic issues*

2. अथातो द्रव्य रस गुण वीर्य विपाक विज्ञानीयमध्यायं व्याख्यास्यामः ।

We shall now comment upon the science that deals with the drug material, its *rasa*, quality, virility, and post-assimilative effect. Ss. su. 40.1.

द्रव्यमौषधमुच्यते रसो मधुरादिकः गुणाः शीतोष्ण स्निग्ध रुक्षमन्द तीक्ष्ण गुरुलघु पिच्छिल विशद श्लक्ष्ण परुष कठिन मृदुद्रव सान्द्र स्थिर सर स्थूलसूक्ष्मा विंशतिः, वीर्यं च अष्टविधं तद्यथा-शीतोष्ण स्निग्ध रूक्षविशद पिच्छिल मृदु तीक्ष्णानि, विंशति गुणानां मध्ये एतेषां अष्टानां गुणानां वीर्यमिति संज्ञा ।

ननु गुणाद्वीर्याणां को भेदः ।

उच्यते-य एव गुणा आमलक्यां त एव हरीतक्याम् अस्ति च वीर्ये विशेषः; तथाहि-उष्णवीर्या हरीतकी शीतवीर्यमामलकमितिः एतेनैतदुक्तं भवति-द्रव्यरसगुण विपाकैर्यत् कर्म कर्तुं न शक्यते तत् कर्म कुर्वन् प्रभावो वीर्यमुच्यते, तथा हि "वीर्यं शक्तिः उत्पत्ति विशेषः सामर्थ्यं प्रभाव इति अनर्थान्तरम् ।

यद्द्रव्यं परिणाम काले स्वाभविकं रसं परित्यज्य रसान्तरं भजते तत्र विपाक इति संज्ञा ।

Drug material is called, (as) the medicine; *rasa* is sweet and the like. Qualities are cold, hot, viscous, dry, slow, quick, heavy, light, mucilaginous, clear, slippery, harsh, hard, soft, fluidy, dense, firm, mobile, gross, fine - twenty (in number). Virility is of eight kinds - cold, hot, viscous, dry, clear, mucilaginous; of the twenty qualities (mentioned earlier), these qualities of these eight (specifically) are designated the virility. If so what is the difference of the virilities as compared with the quality? This is (explained as follows): what qualities occur in *āmalaki* (drug) the same occur in *haritaki*; the (differentiating) speciality is as regards the virility. *Haritaki* is hot in virility, *āmalaki* is cold. By this, the following becomes clear: what action it (i.e. a drug) cannot do by its making, *rasa*, quality and post-assimilartory effect, if it carries out that action, it is that special effect (which) is the virility. Virility is the special origin of power, efficacy and special effect (in fact, these three) are its other alternative terms. What another taste does a (drug) material attain at the time of its being processed (finally), after giving up its own natural taste is designated as *vipaka* or the post assimilatory effect. Da. Ss. su. 40.

3. केचिदाचार्या ब्रुवते-द्रव्यं प्रधानं, कस्मात् । व्यवस्थितत्वात् ।

(*Of these five separate factors*) some experts say that (*it is*) the (physical nature of the) drug material as such that is of greater value (rather than the other separate properties of it such as: the individual types of the quality, the potency and so on). Why? Because of its organisedness.

4. द्रव्य लक्षणं तु क्रियागुणवत् समवायिकारणम् । (यथा पटे तन्तवः)

definition of a crude drug. The characteristic of a crude drug material is that (i) it is a substance that is capable of bringing about a (pharmacological) action (in the human body) (Kriyagunavat) and (ii) this is due to the functioning together here of many factors as an aggregate (*samavayi karaṇam*) (*just as a piece of cloth results because of its many component threads acting together, as a commentator adds here, aptly*). Ss. su. 40.3.

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5. नेत्याहुरन्ये रसास्तु प्रधानं कस्मात्। आगमात् आगमो हि शास्त्रमुच्यते। शास्त्रे हि रसा अधिकृताः। यथा- रसायत्त आहार इति, तस्मिंस्तु प्राणाः, उपदेशाच्च, उपदिश्यन्ते हि रसाः, यथा- मधुराम्ल लवणा वातं शमयन्तिः अनुमानाच्चः रसेन हि अनुमीयते द्रव्यं, यथा- मधुरमितिः ऋषिवचनाच्च, ऋषिवचनं वेदो यथा- किंचिदिज्यार्थं मधुरमाहरेत् इतिः तस्मात् रसाः प्रधानं। रसेषु गुण संज्ञा। रसलक्षणमन्यत्र उपदेक्ष्यामः।

Others opine that this is not so (viz., the physical nature of the crude drug material is not so important, but it is) the *taste* that is of the most cardinal value (among the five, listed above). Why (i) Because *āgamas* say so (This is yet another clear statement of having recognised the existence of much technical literature then itself. Etymologically *āgama* means what has come about by tradition i.,e, previous authoritative and traditional Texts). By *āgamas* are meant the *śāstras* (or the technical works) In the *śastras*, it is the *rasas* that are spoken about. As for e.g., when it said that food is subjected to (i.e., dependent on or regulated by) the *rasas (rasayatta)*, it (means that it) is in the them (viz., the *rasas*), that life itself is situated (therefore), since life (itself) is dependent on food. (ii) Because of the (usual methodology of) teaching. For instance,(they viz., the experts) usually state that the *rasa* of *madhura* (sweet), *amla* (sour) and *lavaṇa* (salt) pacify the *vāta (doṣa)* (and not that the crude drug material in which these reside, does so). (iii) Because of deductability; the drug material taken is deduced on the basis of the *rasas* it produces. For instances, (the fact) that (such and) such a drug is *madhura* (sweet) (is actually deduced on the *rasa* it contains). (iv) Because of the words of the *rsis* (the sages). The words of *ṛṣi* constitute the Veda. For instance, while doing a sacrifice, he (the *ṛṣi* or the disciple who does the *yagna*) will say "bring *madhuram*:" (and not the crude drug or the material which consists of this *madhura rasa*)*

It is because of these reasons, (the experts here consider that) *rasa* is of the greatest value.

The appellate of the quality (the third in the list of the five broad factors for drug action) is (actually included) in the *rasa* itself (and therefore does not need a separate comment). We shall talk (much further) about the chracteristics of the *rasa* elsewhere. Ss. su. 404. 4.

6. नेत्याहुरन्ये, वीर्यं प्रधानमिति। कस्मात्। तद्भशेन औषधकर्म निष्पत्तेः।

इह औषधकर्माणि ऊर्ध्वाधो भाग संशोधन संशमन सांग्राहिक अग्नि दीपन पीडन लेखन वृंहण रसायन वाजीकरण श्वयथुकर विलयन दहन दारण मादन प्राणघ्न विष प्रशमनादीनि वीर्य प्राधन्याद्भवन्ति। तच्च वीर्यं द्विविधं उष्णं शीतं च, अग्नीषोमीयत्वात् जगतः केचिदष्टविधमाहुः - शीतमुष्णं स्निग्धं रूक्ष विशदं पिच्छिलं मृदु तीक्ष्णं चेति।

एतानि वीर्याणि स्वबलगुणोत्कर्षात् रसमभिभूयात् कर्म कुर्वन्ति।

यथा तावत् महत्पंचमूलं कषायं तिक्तानुरसं वातं शमयति, उष्णवीर्यत्वात्; तथा कुलत्थः कषायः, कटुकः, पलाण्डुः, स्नेह भावाच्चऽमधुरश्च इक्षुरसो वातं वर्धयति शीतवीर्यत्वात्; कटुका पिप्पली पित्तं शमयति मृदु शीतवीर्यत्वात्, अम्लमामलकं लवणं सैन्धवं चः तिक्ता काकमाची पित्तंवर्धयति, उष्ण वीर्यत्वात., मधुरा मत्स्याश्चः

कटुकं मूलकं श्लेष्माणं वर्धयति, स्निग्धवीर्यत्वात्;

अम्लं कपित्थं श्लेष्माणं शमयति रूक्षवीर्यत्वात्, मधुरं क्षौद्रं च।

तदेतत् निदर्शनमात्रमुक्तम्।

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* Can this all be taken to show that (i) SS was composed during the times when many other Vedic Samhitas like Bhrgu Samhita were composed, (ii) during this time, the ritual practices of Veda were quite well current, so that its author, viz., Susruta employs references to them in this way almost as a routine manner?

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Others say that this is not so, (but it is the) virility (of the drug) or what is also called potency (that) is (of), more cardinal (value).

Why? (i) It is because of the regulation by potency alone that the activity of the medicine (itself) is derived. Here, (it should no doubt be noted that) the (several) activites of the medicine such as 1. purification, 2. pacification, 3. astringency and constipation, 4. stimulation of digestive power and assimilation, 5, pressing, 6, scarification, 7. augmentation, 8. elixirisation, 9. virilification, 10. causing and removing or dissolution of intumescence, 11. burning, 12 splitting, 13. intoxication and 14. tranquilising the fatal poison** – all these take place (solely) because of the factor of potency(in the drug we use) in the supra (clavicular), the infra (clavicular)as well as both of these regions (i.e., all over the body). This potency is of two kinds: hot and cold, since (anything in) this world (as far as their action is concerend can be considered as being) either powerful like fire *(agneya)* or mild like moon (*saumya*). (*In other words, grading the potency of any drug material as being hot or cold, viz., strong or mild stands to reason in this way*). Some say (however) that this virility or potency is of eight kinds (i.e. not just two, viz., strong or mild): 1. cold (*śīta*), 2. hot (*usṇa*), 3. viscous (*snigdha*). 4. rough *(rūkṣa)*, 5. clear (*viśada*), 6. slimy (*picchila*),. 7. soft *(mṛudu)* and 8. acute (*tīkṣṇa*). These (several) kinds or the potencies carry out their work overcoming the *rasa* beause of augmentation in their own quality and the strength. For instance: as (in) the *bṛhat pancāmula* (though it has) astringent taste and bitter subtaste, pacifies the *vāta* because of its *uṣṇa* vīrya (i.e. the heat here overcomes the activity of the taste and the subtaste). So do *kulattha,* which is astringent and *palāṇḍu* , which is *kaṭuka* (pungent), because of their *snehabhāva* or oleaginous nature. The sugar-cane juice, which is *madhura* (sweet) promotes *vāta* because of its *śīta vīrya* or cool potency. *Pippali* that is *kaṭuka* or pungent pacifices *pitta* because of its soft and *śīta vīrya* or cool potency. So do the *āmalaka* that is acidic and the *saindhava* that is a salt. The *tikta* or bitter *kākamāci* promotes *pitta* because of *uṣṇa vīrya* – hot potency ; *kaṭuka* raddish (pungent raddish) promotes *śleṣma* because of *snigdha vīrya* or a viscous potency. The acidic *kapittha* (the wood apple) pacifices *śleṣma* because of its *rūkṣma vīrya* or dry potency. So is honey, a pacifier of *śleṣma* because of its *rūkṣa vīrya* or dry potency. These are merely some instances (many more can be cited, if desired). Ss. su. 40. 5.

7. भवन्ति च अत्र –

ये रसा वात शमना भवन्ति यदि तेषु वै। रौक्ष्यलाघवशैत्यानि न ते हन्युः समीष्रणम्।।
ये रसा पित्त शमना भवन्ति यदि तेषु वै। तैक्ष्ण्योष्ण्यलघुता श्चैव न ते तत्कर्मकारिणः।।
ये रसा श्लेष्मशमना भवन्ति यदि तेषु वै। स्नेह गौरव शैत्यानि न ते तत्कर्मकारिणः।।
तस्माद्वीर्यं प्रधानमिति।

There is something more here: those *rasas* that are (ordinarily) pacificers of *vāta,*

**. Incidentally, we can consider these fourteen as a list of specifically recognised categories of drug action that SS finds an occasion to mention here. There technical terms in Sanskrit are: 1. *samśodhana*, 2. *samśamana*, 3. *sangrāhika*, 4. *agnidīpana*, 5. *pīdana*, 6. *lepana*, 7. *brhmaṇa*, 8. *rasāyana*, 9. *vājikarana*, 10. *svayatukara vilayana*, 11. *dahana*, 12. *dārana*, 13, *mādana*, 14. *prāṇaghna viṣa praśamana*

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if (in the meanwhile) they are having the virility of roughness, lightness and coldness, they cannot then counteract *vāta doṣa* . (Similarly) the *rasas* that (ordinarily) pacify *pitta,* if they have the potency of acutness, hotness and lightess, they will not do that work. The *rasas* that (ordinarily) pacify *śleṣma* if they have the potency of *sneha* (viscosity), *gaurava* (heaviness) and *śaitya* (coldness), they will not carry out their (habitual) actions. It is because of these reasons, virility is considered to be of most cardinal value (therapeutically) Ss. su. 40, 6-9.

8. नेत्याहुरन्ये विपाकः प्रधानमिति। कस्मात्। सम्यक् मिथ्याविपक्कत्वात्।
इह सर्व द्रव्याणि अभ्यवहृतानि सम्यग् मिथ्या विपक्वानि गुणं दोषं वा जनयन्ति।
तत्र आहुरन्ये प्रति रसं पाक इति।
केचिद् विविधमिच्छन्ति-मधुरमम्लं कटुकं चेति।
तत् तु न सम्यक्, भूतगुणादामात् च अन्यो अम्लो विपाको नास्ति।
पित्तं हि विदग्धं अम्लतामु पैति आग्नेयत्वात्।
यद्येवं लवणोऽपि अन्यः पाको भविष्यति, श्लेष्मा हि विदग्धो लवणतामुपैति।
मधुरो मधुरस्य अम्लो अम्लस्य एवं सर्वेषामिति केचिहाहुः, दृष्टान्तं च उपदिशन्ति, यथा- तावत् क्षीर मुखागतं पच्यमानं मधुरमेव स्यात् तथा शालियवमुग्दादयः प्रकीर्णाः स्वभावं उत्तरकालेऽपि न परित्यजन्ति तद्वदिति।
केचिद्वदन्ति-अबलवन्तो बलवतां वशमायान्ति इति।
एवमनवस्थितिः, तस्मादसिद्धान्त एषः।
आगमे हि द्विविध एव पाको मधुरः कटुकश्च।
तयोः मधुराख्यो गुरू कटुकाख्यो लघुरिति।
तत्र,
पृथिव्यप्तेजोवाय्वाकाशानां द्वैविध्यं भवति गुण साधर्म्यात् गुरुता लघुता चः पृथिव्यापश्च गुर्व्यः शेषाणि लघूनि।
तस्मात्
द्विविध एव पाक इति।

Others say that this is not so, (but, instead) *vipāka* (post-assimilative effect) is more cardinal. Why? Because, every drug material will generate a good quality (or effect) or a (bad) vitiation, depending on whether it is digested (viz., assimilated) properly or improperly. Here some say that every *rasa* has its own *pāka* (viz., as *rasas* are six, *vipākas* ae also six accordingly). Others presume that these post-assimilative effects are of three kinds (only): sweet (*madhura*), acdic (*amla*) and pungent (*kaṭuka*). This however is not correct. Because there are only five elemental principles, viz. The *panca mahabhutas* and the *śāstras* (the technical works) also say so, i.e., that there is no separate *vipāka* called acidic. *Pitta* itself when it is consumed (and digested) attains acidity because of the mildeness of the digestion. If (on the contrary) even salt were to attain a different state (later in this way, i.e. after digesteion), we will have to postulate a fourth *vipaka* (for the salt), for *sleṣma* also attains saltness after being burnt (at the end of digestion).

Other experts presume that the *vipaka* for sweet taste (*madhura*) is sweet (*madhura*) itself and so on, for all the six *rasas* . (They also) illustrate (this statement, by pointing out that) just as milk being boiled in a vessel remains from beginning to the end, only sweet (*madhura*) in taste, so also the rice, the barley and the horsegram (i.e., any other crude drug) do not abandon their own natural (*madhura*) state from the time of their being sown in the soil, germination and ever afterwards (i,e, even after getting digested). Others (however) state here that what is more powerful will conquer what is not powerful. In this way there is an

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unsettledness (of opinion in this regard). (In fact) there is no definite doctrine (at all here, viz., whether the *rasas* are six or less or more or how many *vipākas* do they give rise to, after digestion and the like.)

(Despite all such varied opinions in many purely technical works) in the ayurvedic *sastra* (with which alone we are presently concerned), there are only two kinds of post-assimilative effects, viz., sweet and bitter. Of these, that which is sweet is heavy, what is bitter is light. Herein, for the five elemental principles of *pṛthvi, ap, tejo, vayu* and *akasa*, there will be only two kinds (of *vipāka*), because of the similarity in nature of their qualities; namely heaviness and lighteness. *Pṛthvi* and *āp* are heavy. The others are light. Therefore (on this count also) *vipaka* is of two kinds only (and not, unsettled as stated above).

There is a saying here: In the materials that are being cooked (during digestion), those in which there are the qualities of prthvi and ap, most of them turn out to attain sweet post-assimilative effect. Those in which the qualities of teja, anila and akasa predominate, they mostly turn out to attain bitterness finally.

(We have given above) the collection of the arguments of those who would consider these four factors (of rasa, guna, virya and vipaka) separately. The learned desire (to stress here, on the contrary) the summation effect of all the four (and not the activity of any of the individual factor, which is of theoretical importance only virtually). Ss. su. 40. 10-13.

9. तद्द्रव्यमात्मना किंचित् किंचित् वीर्येण सेवितम्। किंचिद्रसविपाकाभ्यां दोषं हन्ति करोति वा।।
पाको नास्ति विना वीर्याद् वीर्यं नास्ति विना रसात्। रसो नास्ति विना द्रव्यात् द्रव्यं श्रेष्टतमं स्मृतम्।।
जन्यं तु द्रव्य रसयोः अन्योन्यापेक्षिकम् स्मृतम्।
अन्योन्यापेक्षिकं जन्म यथा स्याद् देह देहिनोः।।
वीर्य संज्ञा गुणा येऽष्टौ तेऽपि द्रव्या श्रयाः स्मृताः।
रसेषु न भवन्त्येते निर्गुणास्तु गुणाः स्मृताः।।
द्रव्ये द्रव्याणि यस्माद्धि विपच्यन्ते न षड्रसाः।
श्रेष्ठं द्रव्यमतो ज्ञेयं शेषा भावास्तदा श्रयाः।।
अमीमांस्यानि अचिन्त्यानि प्रसिद्धानि स्वभावतः। आगमेनोपयोज्यानि भेषजानि विचक्षणैः।।
प्रत्यक्षलक्षणफलाः प्रसिद्धाश्च स्वभावतः।
नौषधीहेतुभिर्विद्वान् परीक्षेत कदाचन।।
सहस्रेणापि हेतूनां नांबष्टादिर्विरेचयेत्।
तस्मात् तिष्ठेत्तु मतिमानागमे न तु हेतुषु।।

susruta s opinion (Actually speaking) some materials carry out their activity of destroying or bringing about a vitiation by the very materials that compose them i.e., by their crude drug nature as a whole, while others do so by their virility, still others, by their taste or post assimilative effect.

(In fact), there is no *paka* or assimilation without a virility, no virility without a taste and no taste without a physical material of the crude drug. (In this way, you can really presume, that among all the five factors with which we started this discussions) it is the crude drug material that is of the most cardinal value.

The very birth of the drug material and the taste demand (the existence of) each other, (almost, similarly as) the body (sarira) and (the indweller sariri) demand (the existence of) each other. The eight qualities which are designated (together) as the virility - they are also dependent on the taste, for it has been stated (in other texts that) qualities themselves are qualitiless (i.e. quality is an

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attribute of something else and in itself, it is just nothing). In the materiality (of this body, which is made up of the five elemental principles), it is the material (of the crude drug) that is being cooked and not the six *rasas* (and so on). Therefore (you should) consider that the (crude) drug material is the most pre-eminent. All the others are merely different states (that in addition are) dependent (on this material which is basic).

(Despite all such discussions which are of profound theoretical importance no doubt, but coming to practical points, however) the expert physician should not indulge in any further ratiocination (whether it is this way or, the other way) or indulge in fresh thinking concerning the drugs that are famous because of their very nature. He should straight away employ them as directed by the technical works thereof. Among those whose results are observable directly and which are (already, quite) famous by their very nature, the wise physician should never examine (again). By even thousands of arguments and reasoning, *ambaṣṭa* class of drugs will never act as purgatives. Therefore the intelligent should stay firm in the technical guidance he receives and not on the reasonings (he himself can set forth in these matters). Ss. su. 40. 14-21.

(ii) *specialities of the (crude) drug material*

10. तत्र पृथिव्यप्तेजो वाटव्याकाशानां समुदायात् द्रव्याभिनिर्वृत्तिः उत्कर्षस्तु अभिव्यंजको भवति-इदं पार्थिवमिदमाप्यमिदं तैजसमिदं वायव्यमिदं आकाशीयमिति।

(Any) drug material results from the totality of *pṛthvi* , *āp, tejo, vāyu* and *ākāśa* . (Of these five component factors that which is in excess (in any individual drug material) is denotatory to say that this particular drug is of *pṛthvi*, that one is *āp*, this one is of *teja* and that one is of *vāyu* or this, is of *ākāśa*.

(*The diagnostic characters and pharmacological actions of everyone of these five categories of drugs are now given*)*

तत्र स्थूल सान्द्रमन्द स्थिर गुरु कठिनं गन्धबहुलमीपत्कषायं प्रायशो मधुरमिति पार्थिवं।
तत् स्थैर्य बल गौरव संघातोपचयकरं विशेषतश्च अधोगति स्वभावमिति।

Pṛthvi (Earth) drugs. Therein, what is gross, core or pith, dense, tardy, firm, harsh, heavy, hard, full of smell and slightly astringent - this is of *pṛthvi*. This brings about firmness, strength, heaviness, condensation and accumulation. Particularly, its nature is to move downwards.

शीत स्तिमित स्निग्ध मन्द गुरु सर सान्द्र मृदु पिच्छिलं रसबहुलमीपत्कषायाम्ल लवणं मधुर रस प्रायमाप्यं। तत् स्नेहनह्लादन क्लेदन बन्धन विष्यन्दन करमिति।

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* Very importantly, we can consider these statements as *the* five recognised categories of drug action in general, that SS summarises, such as *pṛthvi* type, *tejasa* type etc.; trying to find analogies in modern pharmacodynamics, specially as in the section on therapy and drugs is the concern of the modern pharmacologists.

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Āp (water) drugs. What is *āp* and mostly of *madhura rasa* is cold, wet, viscous, tardy, heavy, spreading, dense, soft, slimy, full of juice and slightly astringent, acidic and salty. This is responsible for stickiness (or an unctuousness), delight, wetting, binding and liquification.

उष्ण तीक्ष्ण सूक्ष्म रूक्ष खर लघु विशदं रूपबहुलमीषदम्ललवणं कटुकरसप्रायं विशेषतश्च ऊर्ध्वगति स्वभाव मिति तैजसं: तत् दहन पचन दारण तापन प्रकाशन प्रभावर्ण कर मिति।

Tejasa (fire) drugs. What is hot, acute, subtle, rough, harsh, light, clear (and clean) and full of form and quality, slightly acidic and salty, is mostly of a *kaṭuka* or pungent *rasa* and has specially the nature of moving upwards - that is *tejas* (drug). This is responsible for burning, cooling, splitting, heating, illumination, glow and colour.

सूक्ष्म रूक्षखर शिशिर लघु विशदं स्पर्श बहुलं इषत्तिक्तं विशेषतः कषायमिति वायवीयं: तत् वैशद्य लाघवग्लपन विरूक्षण विचारणकरमिति।

Vāyu (Air) drugs. What is subtle, rough, harsh, chilly, light, clear and full of touch, slightly bitter and specially astringent, this is of the (nature of) *vāyu*. This brings about clarification, lightness, exhaustion, roughening and moving hither and thither.

श्लक्ष्ण सूक्ष्म मृदु व्यवायिविशद विविक्तं अव्यक्तरसं शब्द बहुलं आकाशीयं: तन्मार्दव शौषिर्य लाघवकरमिति।

Ākāśa (Sky) drugs. What is slippery and smooth, subtle, soft, pervading and diffusive, clear, discrete, with its *rasa* not explicit, and full of sound-this is of *ākāśa*. This brings about softness, porosity and lightness.

अनेन निदर्शनिन नानौषधिभूतं जगति किंचित् द्रव्यमस्तीति कृत्वा तंतं युक्तिविशेषं अर्थं च अभिसमीक्ष्य स्ववीर्यगुण युक्तानि द्रव्याणि कार्मुकाणि भवन्ति। तानि यदा कुर्वन्ति स कालः, यत् कुर्वन्ति तत् कर्म, येन कुर्वन्ति तत् वीर्यं, यत्र कुर्वन्ति तदधिकरणं, यथा कुर्वन्ति स उपायः, यन्निष्पादयन्ति तत् फलमिति।

By these illustrations consider that in this world, in everything, there is some nature of the drug material and perceiving the particular specialities of the combination as well as the implication and the use thereof, employ that drug material relevant (in the case concerned) because of its virility and quality. it will *then* act as the infallible bow (to shoot the disease concerned). When the drugs so employed bring about their action, *that* would be *the* time factor (for that drug), what it does (i.e., what activity it brings about), would be its *specific* claim, how it does this, would give us *the* clue to the device (that we have to employ in using it), what it brings about finally would be *the* result of its therapy. Ss. su. 41.3-5.

(iii) *therapy and the drugs - pharmacodynamics*

11. तत्र विरेचन द्रव्याणि पृथिव्यम्बुगुण भूयिष्ठानि, पृथिव्यापो गुर्व्यः, तानि गुरुत्वात् अधो गच्छन्ति, तस्मात् विरेचनमधोगुण भूयिष्ठमनुमानात्।

वमन द्रव्याणि अग्निवायु गुण भूयिष्ठानि, अग्नि वायू हि लघू, लघुत्वाच्य तानि ऊर्ध्वं-उत्तिष्ठन्ति, तस्मात् वमनमपि ऊर्ध्वगुण भूयिष्ठम्।

उभयगुण भूयिष्ठमुभयतो भागम्।

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आकाशगुण भूयिष्ठं संशमनं; सांग्राहिकमनिल गुण भूयिष्ठम्, अनिलस्य शोषणात्मकत्वात्; दीपनमग्निगुण भूयिष्ठं तत्समानत्वात्; लेखनमनिलानल गुण भूयिष्ठं; बृंहणं पृथिव्यम्बुगुण भूयिष्ठम्;
एवं औषधकर्माणि अनुमानात् साधयेत्।

(a) *general statements:* Therein, the purgative drugs are full of the qualities of *pṛthvi* and *ap* : these (two) are heavy and because of that heaviness, they go down; purgation is mostly of the quality of going down. Emetic drugs are full of the qualities of *agni* and *vayu*; these are light and because of this lightness, they rise upwards. Therefore, the emetics themselves are chiefly full of the quality of going upwards. That which is abundant in the qualities of both (i.e., going downwards as well as upwards) is capable of purifying, i.e., cleaning both the parts (viz., the supra as well as the infra clavicular regions). Pacification abounds in the quality of *ākāśa* (drugs). Collecting together and constipation abound in the quality of *vayu* (drugs), since *vāyu* has the nature of drying up. Inflamming and stimulation abound in the quality of *agni* (drugs), for they are similar to that (i.e. fire or *agni*). Scarification abounds in *vayu* and *agni* (drugs). Augmentation abounds in the quality of *pṛthvi* and *ap* (drugs). This way, one should derive the activities of the drugs by inference and deduction.

भवन्ति च अत्र-
भूतेजो वारिजैर्द्रव्यैः शमं याति समीरणः। भूम्यम्बु वायुजैः पित्तं क्षिप्रमाप्नोति निर्वृतिम्।।
खतेजो निलजैः श्लेष्मा शममेति शरीरिणाम्। वियत्पवनजाताभ्यां वृद्धिमभ्येति मारुतः।।
आग्नेयमेव यत् द्रव्यं तेन पित्तमुदीर्यते। वसुधा जल जाताभ्यां बलासः परिवर्धते।।
एवमेतत् गुणाधिक्यं द्रव्ये द्रव्ये विनिश्चितम्। द्विशो वा बहुशो वाऽपि ज्ञात्वा दोषेषु च
आचरेत्।।

There is a saying here: the *vayu* gets pacified by the materials born of *pṛthvi, tejas* and *āp*. *Pitta* comes to an end quickly by the materials that are born of *pṛthvi, āp* and *vāyu*. The *śleṣma* of the people gets quietened by the *tejas* of the *vāyu*. *Vāyu* gets an increase by the materials born of the *ākāśa* and *vāyu*. The material which is fiery (*āgneya*) brings forth *pitta*. By the materials born of *pṛthvi* and *āp, kapha* increases. In this way determine the excess of the quality in every individual drug material separately whether it is two fold or multiple and considering these details, properly utilise them as required for everyone of the *doṣas.*

तत्र य इमे गुणा वीर्य संज्ञकाः शीतोष्ण स्निग्ध रूक्षमृदु तीक्ष्ण पिच्छिल विशदास्तेषां तीक्ष्णोष्णौ आग्नेयौ, शीत पिच्छिलौ अम्बुगुण भूयिष्टौ, पृथिव्यम्बुगुण भूयिष्ठः स्नेहः तोयाकाशगुण भूयिष्ठं मृदुत्वं, वायुगुण भूयिष्ठं रौक्ष्यं, क्षिति समीरण गुण भूयिष्ठं वैशद्यं; विपाकौ उक्त गुणौ।
तत्र उष्ण स्निग्धौ वातघ्नौ, शीतमृदु पिच्छिलाः पित्तघ्नाः, तीक्ष्णरूक्ष विशदाः श्लेष्मघ्नाः गुरुपाको वातपित्तघ्नः लघु पाकः श्लेष्मघ्नः। तेषां पिच्छिल विशदौ चक्षुः स्पर्शाभ्यां, स्निग्धरूक्षौ चक्षुषा, तीक्ष्णो मुखे दुःखोत्पादनात्। गुरुपाकः सृष्ट विण्मूत्रतया कफोत्क्लेशेन च, लघुः बद्धविण्मूत्रतया मारुत कोपेन च। तत्र तुल्यगुणेषु भूतेषु रसवैशेष्यमुपलक्षयेत्।
तद्यथा-मधुरो गुरुश्च पार्थिवः, मधुरः स्निग्धश्चाप्य इति।

(b) *specifications.* Therein, the following qualities denote virility: cold, hot, viscous, rough, soft, acute, slimy and clear. Of these, the acute and the hot are *āgneya*. The cold and the slimy abound in the quality of *ap*. The viscous abounds

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in the quality of *pṛthvi* and *ap* Softness abounds in the qualities of *vāyu* . Clearness abounds in the qualities of *pṛthvi* and *vāyu* . We have already told about the qualities of the light and the heavy *vipaka* (viz., that they are *madhura* or sweet and *tikta* or bitter respectively). Therein, the hot and the viscous destroy *vata* ; the cold, the soft and the slimy destroy *pitta* ; the acute, the rough and the clear, destroy the *sleṣma* ; the heavy *vipaka* destroys *vata* and *pitta* ; the light *vipaka* destroys *sleṣma* . Therein, the soft, the cold and the hot are palpable by touch. The slimy and the clear are palpable by touch and sight; the viscous and the rough, by sight; the hot, because of its producing grief in the mouth. The heavy *vipaka* is to be inferred by its being responsible for the ease of bowels and micturition as well as its causing a disquietitude of *kapha* ; and the light *vipaka* by constipation of bowels and micturition as well as the aggravation of the *vayu* . In the case of the materials that abound in similarities of the qualities, find out the specialities of the *rasa* and act accordingly. For instance, the *pṛthvi* material is *madhura* (sweet) and heavy, while the *ap* materials is *madhura* (sweet) and viscous.

भवति च अत्र-
गुणाय उक्ता द्रव्येषु शरीरेष्वपि ते तथा। स्थानवृद्धिक्षयास्तस्मात् देहिनां द्रव्यहेतुकाः ।।

It is said in this connection that the qualities that have been enumerated here exist in the same manner in the body, Therefore, the placement, the increase or the decrease (of dosa, dhatu and mala) wholly result from the materials that are consumed by the individual persons. Ss. su. 41.3-12.

(c) *specialities of the rasa*

आकाश पवन दहनतोय भूमिषु यथासंख्यमेकोत्तर परिवृद्धाः शब्दस्पर्श रूप रसगन्धाः तस्मादाप्यो रसः। परस्पर संसर्गात् परस्परगनुग्रहात् परस्परानुप्रवेशाच्च सर्वेषु सर्वेषां सान्निध्यमस्ति, उत्कर्षापकर्षात्तु ग्रहणम्।

In among the (five elemental *bhūtas*), viz., *ākāśa, vāyu, agni, āpa* and *pṛthvi*, one quality increases at every step of the sequence and in this way sound, touch, form, taste and the smell come about. (that is, in *ākāśa* there occur the sense of only sound; but in *vāyu* the senses of sound and touch, in *agni* the senses of sound, touch and form, in *āp* the senses of sound, touch, form and taste, and in *pṛthvi*, the senses of all these four and also that of smell occur). Therefore, *rasa* (with which we are concerend in this chapter), or taste is of the nature of *āp*. Actually Speaking however, in among these five elemental principles, because they all touch, influence and penetrate one another mutually, in all material, (we have to conclude that) there is the presence of all of these five (in practically any substance). They (i.e., these individual substances) get designated as so and so (viz., as of *pṛthvi, āp*, etc.) by the decrease or the increase of any particular factor concerned (i.e., no absolute categorisation of substances is ever possible, as also remarked earlier).

स खलु आप्यो रसः शेष भूतसंसर्गात् विदग्धः षोढ़ा विभज्यते। तद्यथा-मधुरोऽम्लो लवणः कटुक स्तिक्तः कषाय इति। ते च भूयः परस्पर संसर्गात् त्रिषष्टिधा भिद्यन्ते। तत्र भूम्यंबु गुण बाहुल्यान्मधुरः भूम्यग्निगुण बाहुल्यादम्लः तोयाग्नि गुण बाहुल्याल्लवणः, वाय्वग्निगुण बाहुल्यात् कटुकः वाटय्वाकाशगुणबाहुल्यात् तिक्तः पृथिव्यनिल गुण बाहुल्यात् कषाय इति।

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This *āpya rasa* gets diversified by the contact of the remaining four elemental principles into six kinds after digestion, as *madhura* (sweet), *amla* (acidic), *lavaṇa* (salty), *kaṭuka* (pungent), *tikta* (bitter), and *kaṣāya* (astringent). By mutual contact they mostly get diversifed further into sixty-three kinds, Therein, sweetness results from a preponderance of the qualities of *prthvi* and *ap*, acid, from that of *pṛthvi* and *agni*: salt, from that of *āpa* and *agni*: pungent, from that of *vāyu* and *ākāśa* and astringent, from that of *pṛthvi* and *vāyu*

तत्र वायोरात्मैवात्मा पित्तमाग्नेयं श्लेष्मा सौम्य इति।

Therein *vāyu* results from *vāyu* itself, *pitta* is of the element of fire (*agni*) and śleṣma is of the *soma*, i.e., the property of mildness.

त एते रसाः खयोनिवर्धना, अन्ययोनि प्रशमनाश्च।।

These *rasas* promote what has generated them and tranquillise what is born from a different factor (for e.g, the generative factor for astringent *rasa* is *vayu*, and therefore this *rasa* mitigates *vayu*).

केचिदाहुः-
अग्नीषोमीयत्वात् जगतो रसा द्विविधाः सौम्या आग्नेयाश्च। मधुरतिक्तकषायाः सौम्याः, कट्वम्ल लवणा आग्नेयाः। तत्र मधुराम्ल लवणाः स्निग्धा गुरवश्च, कटुक तिक्तकषाया रूक्षा लघवश्च, सौम्या शीताः आग्नेया उष्णाः।

Some consider that since the whole world can be categorised as severe or mild as far as their action is considered, the *rasa* are also of just two kinds - mild or severe. Herein (we may note that the *rasas* that are) sweet, pungent and the astringent are mild, (while the *rasas* that are) bitter, acidic and the salty, are severe. (Further), the sweet, the acidic and the salty are viscous and heavy; the bitter, the pungent and the astringent are mild, (while the *rasas* that are) bitter, acidic and the salty, are severe. (Further,) the sweet, the acidic and the salty are viscous and heavy; the bitter, the pungent and the astringent are rough and light; the mild are cold and the acute are hot.

pharmacodynamics of the rasas

12. तत्र शैत्य रौक्ष्य लाघववैशद्यवैष्टश्यलक्षणो वायुः, तस्य समान योनिः रसः, सोऽस्य शैत्यात् शैत्यं वर्धयति, रौक्ष्याद्रौक्ष्यं लाघवाल्लाघवं वैशद्याद्वैशद्यं वैष्टम्याद्वैष्टम्यमिति।

Coldness, roughness, lightness, clarity and constipation are the characteristics of *vāyu* (drugs). Of similar nature is the (drug of the) astringent taste. Thus this (category) promotes coldness, roughtness, lightness, clarity and constipation by its own coldness, roughness and so on.

औष्ण्य तैक्ष्ण्य लाघव वैशद्य गुण लक्षणं तस्य समान योनिः कटुको रसः, सोऽस्य औष्ण्यादौष्ण्यं वर्धयति, तैक्ष्ण्यात्तैक्ष्ण्यं रौक्ष्याद्रौक्ष्यं लाघवाल्लाघवं वैशद्याद्वैशद्यमिति।

Hotness, acutness, roughness, lightness and clarity are the characteristics of *pitta*. Of similar nature is the bitter taste. This promotes hotness etc., because of its own hotness, etc.

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माधुर्य स्नेह गौरव शैत्य पैच्छिल्यगुण लक्षणः श्लेष्मा, तस्य समान योनिर्मधुरो रसः, सोऽस्य माधुर्यात् माधुर्यं वर्धयति, स्नेहात् स्नेहं गौरवात् गौरवं शैत्यात् शैत्यं पैच्छिल्यात् पैच्छिल्यमिति।

Sweetness, stickiness, heavyness, coldness, sliminess are the characteistics of the *slesma*. Of similar nature is the sweet taste. This (category of drugs therefore) promotes sweetness, etc. by its own sweetness, etc.

तस्य पुनरन्य योनिः कटुको रसः स श्लेष्मणः प्रत्यनीकत्वात् कटुकत्वात् माधुर्यमभिभवति, रौक्ष्यात् स्नेहं लाघवात् गौरवम् औष्ण्यात् शैत्यं वैशद्यात् पैच्छिल्यमिति। तदेतत् निदर्शन मात्रमुक्तं भवति।

Another generative source of *kapha* is the bitter taste. This nullifies the sweetness because it is contradictory to *śleṣma* (and) is bitter in itself; (nullifies) stickiness because of its roughness; (nullifies) heaviness by its lightness; (nullifies) coldness because of its hotness and (nullifies) sliminess because of its own clarity. This is merely an illustration. (You should assume a similar effect in other cases).

रसलक्षणमत ऊर्ध्वं वक्ष्यामः - तत्र, यः परितोषमुत्पादयति प्रह्लादयति तर्पयति जीवयति मुखोपलेपं जनयति श्लेष्माणं च अभिवर्धयति स मधुरः;

यो दन्त हर्षमुत्पाद यति मुखास्रावं जनयति श्रद्धां च उत्पादयति सोऽम्लः;

यो भक्त रुचिमुत्पादयति कफ प्रसेकं जनयति मार्दवं च आपादयति स लवणः;

यो जिह्वाग्रं बाधते उद्वेगं जनयति शिरो गृह्णी ते नासिकां च स्रावयति स कटुकः;

यो गले चोषमुत्पादयति मुखवैशद्यं जनयति भक्त रुचिं च आपादयति हर्षं स तिक्तः।

यो वकत्रं परिशोषयति जिह्वां स्तम्भयति कण्ठं बध्नाति हृदयं कर्षति पीडयति स कषाय इति।

We shall now tell the characteristics of the (six categories of) *rasas*. Herein, what produces a sense of satisfaction, what causes a delight, a refreshing, an enlivening and a smearing of mouth (by inducing excess salivation?) and what promotoes *śleṣma*, that is *madhura* or sweet. That which causes morbid sensitiveness of teeth, generates a secretion in the mouth, and produces interest in eating is acidic taste. That which produces taste or a relish in food, generates a flowing forth of *kapha* and secures for one a softness, is *salt*. What troubles the tip of the tongue, generates an emotional excitation if taken to head (i.e., in a quick and intense way) and brings about a discharge in the nose, is *bitter*. That which causes a burning up in the throat, generates a clarification in the mouth and brings about a taste in the food (that we eat) as well as delight, is *pungent*. What dries up the mouth, stops the tongue, ties up the throat and contracts as well as presses the heart, is *astringent*.

रस गुणानत ऊर्ध्वं वक्ष्यामः - तत्र मधुरो रसो रसरक्तमांसमेदोऽस्थि मज्जौजः शुक्र-स्तन्य वर्धनः चक्षुष्यः केश्यो वर्ण्यो बलकृत्सन्धानः शोणितरसप्रसादनो बालवृद्ध क्षतक्षीण हितः षट्पदपिपीलिका नामिष्टतमस्तृष्णामूर्छादाह प्रशमनः षडिन्द्रिय प्रसादनः कृमि कफकर श्चेतिः स एवं गुणोऽप्येक एव अत्यर्थमासेव्यमानः कासश्वासालसकवमथु वदनमाधुर्य स्वरोपघातकृमिगलगण्डानापादयति यथाऽबुर्द श्लीपद बस्ति गुदोपलेप अभिष्यन्द प्रभृतीन् जनयति।

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We shall now tell the qualities of (the individual categories of) the *rasas*. The sweet taste (*madhura rasa*) promotes the growth of the assimilable essence of food, blood, flesh, fat, bone, marrow, semen and milk (of the breast); is wholesome to the eyes and the hair; is responsible for the colour (of the skin); (it is) strengthening; (it) joins (up the broken bones etc.); (it) propitiates blood and rasa; (it) is wholesome to the young, the old, the wounded and the emaciated; (it) is most liked by the bees and ants; (it) quenches thirst, swooning, and burning; (it) propitiates all the six *indriyas* (i.e., the five senses and the mind) and brings about worm infection and *kapha*. Though it has these qualities, if consumed excessively, it brings about cough, difficulties of breathing, flatulence (intumescence of the abdomen with constipation and wind), nausea, sweetness of the mouth, damage to the voice, helminthiasis, goitre and also generates tumour, elephantiasis, besmearedness at the bladder and the rectum, running at the eyes and the like.

अम्लो जरणः पाचनो दीपनः पवन निग्रहणोऽनुलोमनः कोष्ठ विदाही बहिः शीतः क्लेदनः प्रायशो हृद्य श्चेतिः स एवं गुणोऽप्येक एवात्यर्थमुप सेव्यमानो दन्तहर्ष नयन संमीलन रोम संवेजन कफ विलयन शरीर शैथिल्याना पादयति, तथा क्षताभिहतदग्ध दष्टभग्न रुग्ण शून प्रच्यतावत्रित विसर्पितच्छिन्नभिन्न विद्धोत्पिष्टादीनि पाचयति आग्नेय स्वभावात् परिदहति कण्ठमुरु हृदयं चेति।

The acidic *rasa* is digestive, stimulative, removes *vayu*, carminative, scorches the viscera, (and is) cold outside; (it) moistens and (is) probably savoury (i.e., it makes the food savoury). Even though it has these (good) qualities, when taken in alone and excessively, it brings about a chattering of the teeth, a closing in or contracting of the eyes, a horripilation, a dissolution of the *kapha* and a looseness of the body. Because of its *agneya tatva* (i.e., the principle of fire) it also cooks up the lesions, injuries, burns, bitten wounds, (as well as those that are) broken, swollen with a hollowness, diseased, dislocated, wetted by fluid excretion of an insect, erysepelated, cut, split or bored and the pulverised and the like. In addition, it causes a (sensation of) burning in the throat, the chest and the heart.

लवणः संशोधनः पाचनो विश्लेषणः क्लेदनः शैथिल्य कृदुष्णः सर्व रस प्रत्यनीको मार्गविशोधनः सर्व शरीरावयवमार्दवकर श्चेतिः स एवं गुणोऽप्येक एवात्यर्थमासेव्यमानो गात्र कण्डूकोठ शोफ वैवर्ण्यपुंस्त्वोप घातेन्द्रियोपतापमुखाक्षिपाक रक्त पित्त वात शोणिताम्लीका प्रभृतीन् आपादयति।।

The salt cleanses, cooks, rends apart and wets; causes a laxness or a flaccidity; (it) is hot, antagonistic to all the (other) *rasas*, cleanses up the pathways (of urine, bowls, etc.) and softens the limbs of the whole of the body. Even though it has these (good) qualities, if taken in excess and alone, it brings about an itching all over the body, a *koṭha* (a leprosy with large round spots, viz., ringworm, impetigo?), a morbid swelling, a change of colouration, a destruction of maleness, trouble in the sense organs, an inflammation in the face and the eyes, a plethora, a *vāta soṇita* (a disease of blood, vitiated with *vāta*) and an acidity of the stomach and the like.

कटुको दीपनः पाचनो रोचनः शोधनः स्थौल्यालस्यकफकृमिविषकुष्ठकण्डूप्रशमनः सन्धिबन्धविच्छेदनोऽवसादनः स्तन्य शुक्रमेदसामुपहन्ता चेतिः स एवं गुणोऽप्येक एवात्यर्थमुपसेव्यमानो भ्रममदगल तालवोष्ठ शोष दाह संतापबल विघातकम्प तोद भेदकृत् कर चरण पार्श्वपृष्ठप्रभृतिषु च वात शूलान् आपादयति।

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The bitter *rasa* stimulates, cooks, appetises and cleaness; alleviates stoutness, lethargy, *kapha* , worm (infection), poison, kusta (skin diseases) and itching; loosens the grippings at the joints and is an eschariotic. It also destroys (the vitiations of) milk, semen, and fat. Even though it has these (good) qualities, if taken alone and in excess, it brings about a giddiness, an intoxicatedness; a dryness at the throat, palate and the lips; a burningness; a general distress; (it) destroys the strength (of the body) (and causes) a tremor, a pain as if a needle is being pricked, or as if sometihing is being split (there) and also causes *vāta* pain in the hands, the feet, the sides and the back.

तिक्तः छेदनो रोचनो दीपनः शोधनः कण्डू कोठ तृष्णामूर्छाज्वर प्रशमनः स्तन्य शोधनो विण्मूत्रक्लेद मेदोवसापूयोपशोषण श्चेतिः स एवं गुणोऽप्येक एवं अत्यर्थमुपसेव्यमानो गात्रमन्यास्तम्भ आक्षेपकार्दित शिरः शूल भ्रम तोद भेदच्छेदास्य वैरस्यान् आपादयति।

The pungent cuts apart (the *doṣas* of *kapha* etc.), appetises, stimulates and cleaneses, allays itching, kotha (tissue rotting, for e.g. gangrene,) thirst, swooning and fever; cleanses breast milk, drives up faeces, urine, wetness, fat, marrow and pus. Eventhough it has these (good) qualities, if taken alone and in excess, it causes a stiffness or a rigidity of the body and the neck, a convulsion and a palpitation, a facial paralysis,a headache, a dizziness, a pain as if a needle is pricking or the region is being split and an insipidity in the mouth.

कषायः संग्राहको रोपणः स्तम्भनः शोधनो लेखनः शोषणः पीडनः क्लेदोपशोषण श्चेतिः स एवं गुणोप्येक एव अत्यर्थमुपसेव्यमानो हृत्पीडास्य शोषोदरा ध्यान वाक्यग्रह मन्यास्तम्भ गात्र स्फुरण चुमुचुमायन आकुंचन आक्षेपण प्रभृतीन् जनयति।

The astringent constipates, heals, stops, cleanses, scarifies, dries, presses and dries up wetness. Eventhough it has these (good) qualities, if taken alone and in excess, it generates a pressing (down) in the heart, a drying up of the mouth, a bloating of the stomach, a paralysis of speech, a stiffness or rigidity of the neck, a throbbing in the body, a tingling sensation, a contraction (of the lips) and a tossing about and the like. Ss. su. 46.2.-10.

d. *pharmacodynamics*

13. तत्र आदौ रस द्रव्य विकारप्रभावान् वक्ष्यामः।

(geneal scope) Therein, we shall speak at the outset (of our discussing the mutual relation between the *rasa* of the drug material and the *doṣa,* causing the morbidity in the body), about the (respective) powers of the *rasas* (the active principles of the drug materials), the drug materials, the vitiations and the morbidities. (These constitute together the full scope of the the discipline of pharmacology). Cs. vi. 1.3.

न हि विकृति विषम समवेतानां नानात्मकानां परस्परेण चोपहता नामन्यैश्च... समुदाय प्रभावतत्वमध्यवसातुं शक्यम्। तथा युक्ते समुदये समुदाय प्रभाव तत्वमेवोपलभ्य ततो द्रव्यविकार प्रभाव तत्वं व्यवस्येत्।

It is not possible to infer the action of a compound substance from the action of the constituents, as in a compound, the properties of various forms get changed with

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one another, when thus variously combined. In such complex cases, therefore, one should attempt to know the principle of the effect of the changes of the (drug) material after having ascertained (first) the action of the principle of the community of the compound substances, alone. Ca. vi. 1. 10,11.

रस स्तावत् षट्-मधुराम्ललवण कटु तिक्त कषायाः। ते सम्यगुपयुज्यमानाः शरीरं यापयन्ति, मिथ्योप युज्यमानास्तु खलु दोष प्रकोपायोपकल्पन्ते।

The *rasas* are six; sweet,acid, salt, bitter, pungent and astringent. When these are being employed properly (as the several tastes in the food consumed), they carry on and sustain the body: if employed wrongly they (themselves will) become responsible to provoke a vitiator. Cs. vi. 1.4.

दोषाः पुनस्त्रयो वातपित्त श्लेष्माणः। ते प्रकृतिभूताः शरीरोपकारका भवन्ति, विकृतिमापन्नास्तु खलु नानाविधैर्विकारैः शरीरमुपतापयन्ति।

And the vitiators ae three: *vāta, pitta* and *śleṣma* . When these are in their natural form they become beneficiary to the body: when they become deranged however, they assail the body by various types of diseases. Cs. vi. 1.5.

तत्र दोषमेकैकं त्रय स्त्रयो रसा जनयन्ति, त्रय स्त्रयश्चोपशमयन्ति। तद्यथा-कटु तिक्तकषाया वातं जनयन्ति मधुराम्ललवणस्त्वेनं शमयन्ति कट्वम्ल लवणाः पित्तं जनयन्ति मधुरतिक्तकषायस्त्वेनच्छमयन्तिः मधुराम्ल लवणाः श्लेष्माणं जनयन्ति कटु तिक्त कषायास्त्वेनं शमयन्ति।

Therein, sets of three rasas provoke one specific vitiator and sets of three *rasas* again alleviate one specific vitiator. (This is) as follows: bitter, pungent and astrigent rasas provoke vāta; sweet, acid and salt alleviate it; bitter, acid and salt provoke slesma and bitter, pungent and astringent alleviate. it. Cs. vi. 1.6.

रस दोष सन्निपाते तु ये यैर्दोषैः समानगुणाः समान गुण भूयिष्टावा भवन्ति ते तान् अभिवर्धयन्ति विपरीतगुणा विपरीतगुण भूयिष्ठा वा शमयन्त्यभ्यस्यमाना इति। एतद् व्यवस्था हेतोः षट्त्वमुपदिश्यते रसानां परस्परेण असंसृष्टानां त्रित्वं च दोषाणां।।

A general principle that holds good is that when a particular active principle of *rasa* (of the drug used) comes in (intimate) contact with a vitiator, if that *rasa* is similar in quality or more or less similar in quality to the vitiator, it will (on the principle of drug action stated above) augment the provocation; if, of a counteracting quality or more or less counteracting, it will alleviate it, if used habitually. It is because of this state of affairs, we speak of mutually discrete six natures of *rasas* and three natures of the vitiators. Cs. vi. 1.7.

संसर्गविकल्पविस्तरो हि अपरिसंख्येयो भवति विकल्प भेदापरिसंख्येयत्वात्।।

The extent of the contact and the alternatives that can come about among these (six *rasas* and the three vitiators) become uncountable because of the uncountability of the (possible) infinite altenative differences. Cs. vi. 1.8.

14. तत्र खलु अनेकरसेषु द्रव्येषु अनेकदोषात्मकेषु च विकारेषु रसदोषप्रभावमेकैकश्येन अभिसमीक्ष्य ततो द्रव्य विकारयोः प्रभावतत्त्वं व्यवस्येत्।

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Therein, in cases of drug materials that have many *rasas,* and morbidities that have many *doṣas,* one should first examine fully the mutual action of the *rasas* and the *doṣas* individually and then only determine that specific principle of the action between the drug material and the morbidity (as suited to the occasion in hand). Cs. vi. 1.9.

न तु एवं खलु सर्वत्र। न हि विकृति विषम समवेतानां नानात्मकानां परस्परेण च उपहतानां अन्यैश्च विकल्पनैर्विकल्पितानामवयवप्रभावाननुमानेनैव समुदाय प्रभावतत्वमध्यवसातुं शक्यम्।

But this is not so in all places. It is not possible to determine the principle of the community effect by merely inferring from its individual components, in cases that are accompanied with complex morbidities of various types, mutually afflicting one another and as they get altered by (yet) other possibilities.

तथायुक्ते हि समुदये समुदायप्रभावतत्वमेवमेवोपलभ्य द्रव्यविकारतत्वं व्यवस्येत्।

In such cases of a community (of factors), one should first determine in the same the community effect and then determine the principle of the drug material and the morbidity.

तस्मात् रसप्रभावतश्च द्रव्यप्रभावतश्च दोषप्रभावतश्च विकारप्रभावतश्च तत्वमुपदेक्ष्यामः।

That is why we now proceed to teach the principles of drug action in terms of the effects of the *rasa,* the effects of the drug material, the effects of the vitiator and the effects of the morbidity., Cs. vi. 3.12.

क्वाचिदेको रसः कल्प्यः संयुक्ताश्च रसाः क्वचित्।
दोषौषधादीन् संचिन्त्य भिषजां सिद्धिमिच्छता।।
द्रव्याणि द्विरसादीनि संयुक्तांश्च रसान् बुधाः। रसानेकैकशो वाऽपि कल्पयन्ति गदान् प्रति।।

The physician (who would wish to decide the drug needed for the occasion on the basis of the *rasa* aspects of its, and) desiring to succeed (in his work) should fully consider (first) the vitiations (in the patient) and the medicine (he wishes to administer here) and then conceive of (using) a single *rasa* drug sometimes and a drug of a combination of *rasas* (depending upon the situation). The wise conceive of using drug materials of two *rasas,* or of a combination of *rasas* or sometimes, in terms of every single *rasa* separately depending upon the disease concerend. Cs. su. 26. 25, 26.

यः स्यात् रसविकल्पज्ञः स्याच्च दोषविकल्पवित्। न स मुह्येद्विकाराणां हेतुलिंगङ्. गोप शान्तिषु।।

If a (physician) who understands well the (possible) alternatives among the *rasas* (in the drugs) and (also) knows well the (possible) alternatives among the vitiations (in the patient's body) such a person will not get perplexed in (determining) the causes, the symptoms and the palliative measures for the diseases. Cs. su. 26. 26.

(*rasas* – a general outline)

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15. रसनाग्राह्यो गुणस्तस्य जलं योनिः

(*definition* :) The quality that is graspable by tongue (is taste). Its source (lit. womb) is water. Ss. su. 42. 3.

रसनार्थो रसस्तस्य द्रव्यमापः क्षितिस्तथा। निर्वृत्तौ च विशेषे च प्रत्ययाः खादयस्त्रयः।।
स्वादुरम्लोऽथ लवणः कटुकस्तिक्त एव च। कषायश्चेति षट्कोऽयं रसानां संग्रहः स्मृतः।।

Taste is what is meant for being understood by the tongue. Its material basis is water and earth (out of the five primordial elements). In deciding its further specialisation (that the taste here is sweet, bitter, etc.), the factors responsible are the (other) three (of the primordials) viz., sky and the like (i.e. Sky, Fire and Air). Sweet, acid and salt, bitter, and then again, pungent and astringent - this six is said to be the collection of the tastes. Cs. su. 1. 64. 65

स्वाद्वम्ल लवणा वायुं कषायस्वादुतिक्ताः।
जयन्ति पित्तं श्लेष्माणं कषायकटु तिक्तकाः।

(*interaction among the rasas*) Sweet, acid and salt conquer *vāta* ; astringent, sweet and pungent (conquer) the *pitta* ; and astringent, bitter and pungent (conquer) the *śleṣma*. Cs. su. 1.66.

कट्वम्ल लवणाः पित्तं स्वाद्वम्ल लवणाः कफम्।
कटुतिक्त कषायाश्च कोपयन्ति समीरणम्।।

Bitter, acid, and salt provoke *pitta* , sweet, acid and salt (provoke) the *kapha* and bitter, pungent and astringent (provoke) the *vāta*. Cs. su. 1.67.

रस स्तावत् षट्-मधुराम्ल लवणकटु तिक्तकषायाः। ते सम्यगुपयुज्यमानाः शरीरं यापयन्ति मिथ्योपयुज्यमानास्तु खलु दोष प्रकोपायोपकल्पन्ते।
दोषाः पुनस्त्रयो वातपित्त श्लेष्माणः। ते प्रकृतिभूताः शरीरोपकारका भवन्ति। विकृतिमापन्नास्तु खलु नानाविधैर्विकारैः शरीरमुपतापयन्ति। तत्र दोषमेकैकं त्रयस्त्रयो रसा जनयन्ति त्रयस्त्रयश्च उपशमयन्ति।

The rasas are six - sweet, acid, salt, pungent, bitter and astringent. Properly used, they sustain the body in health, ill used, they become responsible to provoke the vitiations. And the vitiations are three. When normal they become advantageous to the body; when they have become abnormal they certainly afflict the body by causing various disordes. Therein, each of these three vitiations is provoked by three tastes and is allayed by the other three tastes. Cs. vi. 1, 4-6(i).

तद्यथा-कटु तिक्तकषाया वातं जनयन्ति मधुराम्ललवणोस्त्वेनं शमयन्ति; कट्वम्ललवणाः पित्तं जनयन्ति मधुर तिक्त कषाया स्त्वेनं शमयन्ति, मधुराम्ल लवणाः श्लेष्माणं जनयन्ति, कटुतिक्तकषायास्त्वेनं शमयन्ति।

Thus the pungent, the bitter and the astringent tastes provoke *vata* ; the sweet, the acid and the salt tastes allay it; the pungent, the acid and the salt tastes provoke *pitta* ; the sweet, the bitter and the astringent tastes allay it. The sweet, the acid and the salt provoke the *kapha* ; the pungent, the bitter and the astringent tastes allay it. Cs. vi. 1.6.

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पृथिव्युदकाभ्यामुल्बणाभ्यां मधुर रसस्य, तेजः पृथिवीभ्याममलस्य उदकतेजोभ्यां लवणस्य वाय्वाकाशाभ्यां तिक्तस्य तेजोवायुभ्यां कटुकस्य वायु पृथिवीभ्यां कषायस्य उत्पत्तिर्भवति।

(*origin* :) The origin of the taste of sweet comes about by the preponderance of the priomordial elements of earth and water; of salt, by that of water and fire; of bitter, by that of air and space; of pungent, by that of fire and air; of astringent, by that of air and earth. Ahsu. 10.1.

मधुर रसरूपमनुलिम्पत्यास्वाद्यमानो देहस्य ह्लादनोऽक्षप्रसादनः पिपीलिकादीनां प्रियः च; अम्लरूपम् मुख क्षालनः रोमहर्षणो दन्तहर्षणोऽक्षिभ्रुवनिकोचनः; लवणरूपम् आस्यं स्यन्दयति कपोलगलदाहं च करोति; तिक्तरूपम्-आस्यं विशदयति रसनां प्रतिहन्ति; कटुरूपम्- जिह्वामुद्वेजयति चिमिचिमां कुर्वन् अक्षिनासास्यं स्रावयति कपोलौ दहति; कषायरूपं जिह्वां जडयेत् कण्ठ स्रोतोविबन्धं च कुर्यात्।

(*effects and activities in the body*) *Sweet* besmears the mouth of the taster, delights the body and is gratifying to the eyes; it is also enjoyable for the ants and the like. *Acidic* brings about a horripilation, if the face is washed with it; the teeth will stand on an end, and a contraction of eyes and eyebrows (ensues). *Salt* makes the mouth water, and brings about a sensation of burning at the cheeks and the throat. *Bitter,* clarifies the mouth and strikes (viz. is immediately repellant to) the tongue. *Pungent,* excites the tip of the tongue, makes the eyes, the nose and the mouth ooze out water, causing a sensation of kindling, and, burns the cheeks. *Astringent* makes the tongue heavy and inert and obstructs the channel of the throat (i.e. the gullet). Ahr. su. 10.2.6.

मधुरलवणयोर्मधुरो विपाकः अम्लस्य अम्ल एव कटुतिक्त कषायाणां कटुः।

(*post assimilatory effects* :) The post assimilatory effect of sweet and salt is sweet. For acidic, it is acidic only. That of bitter, pungent and astringent, (it) is bitter., Ahr. su., 9.21.

शीतवीर्य रसाः मधुरस्तिक्तः कषायश्चः उष्णवीर्याः अम्लो लवणः कटुः।

(*potency* :) Sweet, pungent and astringent are of cold potency. Acid, salt and bitter are of hot potency. Ahr. su. 10. 37. 39.

स्निग्धरसाः मधुराम्ललवणाः, रुक्षरसाः तिक्तकटुकषायाः, गुरु रसाः मधुरलवण कषायाः, लघु रसाः अम्ल कटु तिक्ताः।

(*qualities* :) Of oleative essence are the sweet, the acid and the salt. Of dry essence are the bitter, the pungent and the astringent. Of heavy essence are the sweet, the salt and the astringent. Of light essence are the acid, the bitter and the pungent. Ahr. su. 10. 37-39.

(*pharmacological actions based on rasa*)

सप्त धातुवर्धनः ओजः स्तन्यवर्धनः चक्षुष्यः केश्यो वर्ण्यो बलकृत् संधानो रसरक्त प्रसादनो बालवृद्ध क्षत क्षीण हितः तृष्णामूर्च्छा दाहप्रशमनः षडिन्द्रिय प्रसादनः कृमिकरश्च।

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sweet : growth of the seven priomordial elements (of the body viz. tissue development), vitalising, galactogenic; promotive of (good) eye sight, hair formation and complexion, strengthening; promotive of joinging up, beneficial to the (formation) of assimilable nutrient fluids and blood, wholesome to the children, the old and those who have become weak after a lesion; paliative of thirst, swooning and burning; beneficial to the six sense organs and promotive of worm infection.

जरणो दीपनः पाचनः पवन निग्रहणोऽनुलोमनः कोष्टविदाही बहिशीतः क्लेदनः प्रायशो हृद्यश्च।

acid : corrosion, stimulation, digestion, destruction and homologisation of vata (vitiation), causing a burning at the viscera (e.g. stomach), cold outside, causing a wetness and probably good to the heart.

संशोधनः पाचनो विश्लेषणः क्लेदनः शैथिल्यकृदुष्णः सर्वरसप्रत्यनीको मार्ग विशोधनः सर्व शरीरावयवमार्दवकरश्च।

salt : clarifying, digestive, divisive (or splitting), causing a wetness, and a laxity, hot , countering all the (other) *rasas*, cleansing the channels (of the body) and softening to the limbs of the whole of the body.

दीपनः पाचनो रोचनः शोधनः स्थौल्यालस्यकफ कृमि विषकुष्ठकण्डूप्रशमनः सन्धिबन्ध विच्छेदनोऽवसादनः स्तन्य शुक्रमेदसामुपहन्ता च।

bitter : stimulative, digestive, promoting tastiness, cleansing : ameliorative of stoutness, laziness, *kapha* vitiation, worm infection, toxicity, skin infection and itching, cutting the obstructions in the joints, escharotic, destructive of milk, semen and fat.

छेदनो रोचनो दीपनः शोधनः कण्डू कोठतुष्णामूर्च्छाज्वरप्रशमनः स्तन्य शोधनो विण्मूत्र क्लेद मेदो वसा पूयोपशोषणश्च।

pungent : cutting, promoting tastiness, stimulative, cleansing; ameliorative of itching, *koṭha* (a kind of leprosy with large, round spots; ringworm, impetigo ?), thirst, fainting and fever, cleansing to milk and drying to the (formation of) stools, urine, wetness (i.e. sweating ?), fat, adipose tissue and pus. Cs. su. 26. 43

प्रयुक्तः कटुकः पूर्वं पैच्छिल्यं गौरवं च यत्। श्लेष्मणस्तंनिहन्त्याशु तिक्तस्तस्मादनन्तरम्।।

(This bitter taste when employed kills *śleṣma* and also destroys immediately the mucilaginousness and heaviness. Pungent (acts) afterwards. Ka. Khi. 6. 25.

pharmacological actions : It conquers the diseases of the throat, darda kusta, flatulence and edema, depresses the wound, dries up the wetness, the fat, the marrow, the faecal matter and the urine (it is), stimulative, digestive, tasty (it); cleaness, dries up the food, cuts the tyings, opens the channels and removes the kapha vitiation . If used in excess, it brings about thirst, loss of semen and strength, (also) fainting, contraction, tremors and distress at the waist and the back. Cs. su. 1.66

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कटुरूपम-जिह्वाग्रमुद्वेजयति चिमिचिमां कुर्वन् अक्षिनासास्यं स्रावयति कपोलौ दहति।

characteristics as a taste. It (the bitter taste) excites the tip of the tongue, creates an oozing at the eyes and the nose after creating a tingling sensation and remains as if burning at the cheeks. Ah. su. 10.5.

संग्राहको रोपणः स्तम्भनः शोधनो लेखनः शोषण पीडनः क्लेदोपशोषणश्च।
astringent : contractive, healing, styptic, cleansing, scarifying, drying, pressing, and drying up of wetness. Ca. su. 26. 43. Su. su. 42. 10.

इत्येवमेते षड्रसाः पृथक्त्वेन एकत्वेन वा मात्रशः सम्यगुपयुज्यमाना उपकाराय भवन्ति अध्यात्म लोकस्य अपकारकराः पुनरतोऽन्यतो भवन्त्युपयुज्यमानाः, तान् विद्वानुपकारार्थमेव मात्रशः सम्यगुपयोजयेदिति।

These six rasas used in separateness or together according to the measures (prescribed) in this way become beneficial to all persons. They become harmful however, if utilised in any way other than this. The injunction (therefore) is that the learned should use them properly only for beneficial purposes and within measures. Cs. su. 26. 44.

शीतं वीर्येण यद् द्रव्यं मधुरं रसपाकयोः। तयोरम्लं यदुष्णं च यद् द्रव्यं कटुकं तयोः।

That (drug) material which is sweet in *rasa* and post-assimilatory effect is cold in virility. That (drug) material which is acidic in virility in *rasa* and post-assimilatory effect, its virility is hot and that which is bitter in *rasa* and post-assimilatory effect, its virility is hot.

रौक्ष्यात् कषायो रूक्षाणामुतमो मध्यमः कटुः। तिक्तोऽवरस्तथोष्णानामुष्णत्वात् लवणः परः।।
मध्यो अम्लः कटुकश्चान्त्यः स्निग्धानां मधुरः परः। मध्योऽम्लो लवणश्चान्त्यो रसः स्नेहान्निरुच्यते।।
मध्योत्कृष्टावराः शैत्यात् कषायस्वादु तिक्तकाः। स्वादुर्गुरुत्वादधिकः कषायात् लवणोऽवरः।।

In roughness, astringent is the best, bitter is medium and pungent, the worst. Similarly, among the hot, salt is the best, acid is the medium and bitter, the worst. Among the unctuous, sweet is the best, acid is the medium and salt, the worst. Among the cold in virility, the best, the medium and the worst are astringent, sweet and pungent respectively. Among the heavy, sweet is greater than astringent and salt is the inferior. Cs. su. 26. 53-55.

post-assimilatory effect.

कटुकादि शब्देन तदाधारं द्रव्यमुच्यते यतो न रसाः प्रच्यन्ते किंतु द्रव्यमेव,... विपाक लक्षणं तु जठराग्नि योगादाहारस्य निष्ठाकाले यो गुण उत्पद्यते स विपाकः; वचनं हि "जाठरेणाग्निना योगाद्यदुदेति रसान्तरम्। रसानां परिणामान्ते स विपाक इति स्मृतः"।

By the term of "bitter" and the like (here i.e. when the action of the *rasa* aspect of the drug in the body is considered), the (drug) material which is the basis of the (*rasa*) is referred to, for it is not the *rasas* that are digested but only the drug material .....The characteristic of *vipaka* is that it is *that* quality which arises at the time of culmination (of the process) of the food due to the employment of the digesstive fire. There is a statement : "That change of *rasa* that arises by the

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application of the digestive fire, at the end of the transformation of the *rasas, that* is regarded as the post assimilatory effect or *vipaka*. Cakra.

चरके मधुरोऽम्लो लवणश्चेति विपाक त्रयमुक्तं सुश्रुते तु मधुरः कटुकश्चेति विपाकद्व्यमुक्तं, एतद्विरोध परिहारार्थं गंगाधरेणैव समाधानमुक्तं "रसपाकाभिप्रायेण त्रिधा विपाक उक्तः चरकेण सुश्रुते भूतगुणपाकाभिप्रायेण द्विधा विपाक उक्तौ"।

In Caraka, a triad of the post assimilatory effect is spoken about, sweet, acid and salt; but in Susruta only a diad of this is spoken, sweet and bitter. To remove the contradiction here, Gangadara speaks of this compromise : Caraka speaks of three with the assimilatory products of the *rasas* in view, while Susruta speaks of two with the assimilatory products of the primoridal element involved, in view. Jalpakalpataru.

16. अग्रेतु तावद् द्रव्य भेदमभिप्रेत्य किंचिदभिधास्यामः।
सर्वं द्रव्यं पांचभौतिकमस्मिन्नर्थे। तच्येतनावदचेतनं च।
तस्य गुणाः शब्दादयो गुर्वादयश्च द्रवान्ताः, कर्म पंचविधमुक्तं वमनादि।

(*pharmacological actions based on qualities, etc.*) At the outset itself (i.e. before we commence the discussion of the tastes or the *rasas*), we shall tell something keeping the (crude drug) materials in our view (that are the physical bases of these potent qualities of the *rasa*). In this meaning (of acting as substrata for the *rasas*), all (active) materials (i.e. *karya dravyas*) are made up of the five primordial elements. This is (of two types:) animate and inanimate. Its qualities are (those that) commence from heaviness (as seen in earth) and the like (five, in total) and ending with liquidity (fifteen; both together twenty). The (pharmacological) activitites (of these active crude drugs) are spoken to be of five kinds such as emesis, etc. (purgativeness, errhination, enema - oily and the dry). Cs. su. 26. 10.

तत्र द्रव्याणि गुरु खर कठिन मन्द स्थिर सान्द्र स्थूल गन्धगुण बहुलानि पार्थिवाणि, तानि उपचय संघात गौरव स्थैर्य कराणि।

(drugs of the five primordials - panca bhautic) Therein, the drugs that are heavy, rough, hard, slow, steady, clear, dense, gross and predominantly smelly in quality are Earthy. These bring about increased growth, consolidation, heaviness and stabilisation.

द्रव स्निग्धशीतमन्द मृदु पिच्छिल रसगुण बहुलानि आप्यानि तान्युपक्लेदस्नेह बन्ध विष्यन्द मार्दव प्रह्लाद कराणि।

The drugs that are liquid, unctuous, cold, slow, soft, mucilaginous and predominantly juicy in quality are watery. These bring about wetting or soaking, oleation, binding, overflow, softening and delight.

उष्ण तीक्ष्ण सूक्ष्मलघु रुक्ष विशाद रूपगुणबहुलानि आग्नेयानि तानि दाहपाकप्रभाप्रकाशवर्णकराणि।

The drugs that are hot, acute, subtle, light, dry, clear and predominantly formal (i.e. promoting the appearance of form) in quality are Firy. These bring about burning, digestion, shine, effulgence and colour.

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लघु शीत रूक्ष खर विशद सूक्ष्म स्पर्शगुण बहुलानि वायव्यानि तानि रौक्ष्यग्लानि विचारवैशद्य लाघव कराणि।

The drugs that are light, cool, dry, rough, clear, subtle and predominantly touchy in quality are Airy. These bring about roughness, lassitude, motility, clarity and lightness.

मृदुलघु सूक्ष्म श्लक्ष्ण शब्द गुण बहुलानि आकाशात्मकानि तानि मार्दव सौषिर्य लाघवकराणि।

The drugs that are soft, light, subtle, slippery and predominantly sounding in quality are Sky drugs. These bring about softness, porosity and lightness. Cs. su. 26.11.

भेद श्चैषां त्रिषष्टिविधविकल्पो द्रव्यदेशकाल प्रभावात् भवति तमुपदेक्ष्यामः।

The (further) specialisations of these (six *rasas*) are sixty three kinds. The alternatives come about because of (the diverse) effects of the (crude drug) materials, place and time. We shall instruct upon this (now). Cs. su. 26. 14.

त्रिषष्टिः स्यादसंख्येया रसानु रस कल्पनात्। रसास्तरतमाभ्यां तां संख्यामतिपतन्ति हि।

This sixty-three (number) becomes uncountable if one conceives of the possible permutations among the *rasas* and the minor *rasas*. If one conceives of the greater and the greatest among the tastes, the number indeed over-reaches countability. Cs. su. 26. 22

17. परापरत्वे युक्तिश्च संख्या संयोग एव च। विभागश्च पृथक्त्वं च परिमाणमथापि च।।
संस्कारोऽभ्यास इत्येते गुणाज्ञेया परादयः। सिद्ध्युपायाश्चिकित्साया लक्षणस्तान् प्रचक्ष्महे।।

(*qualities*) The superiority and the inferiority, the expedinecy, the enumeration, the combination, the division, the segregatedness, the measure, the culturing and the habituation - these are to be known as the qualities commencing from the "superiority" and so on. These are the means to secure success in medical treatment. I shall tell about them in terms of their individual characteristics. Cs. su. 26. 29. 30.

देशकाल वयोमान पाक वीर्य रसादिषु। परापरत्वे युक्तिश्च योजना या तु युज्यते।।

There is (to be an evaluation in terms of) superiority and inferiority with respect to place, time, age (and) (as they concern the patient for instance) digestivity, potency and the *rasa* quality (as they concern the drug for instance) and the like. Expediency is the (specific trick of) employment by which (anything, for instance, a drug) is employed (to get the maximum effect). Cs. su. 26- 31.

संख्या स्यात् गणितं योगः सह संयोग उच्यते। द्रव्याणां द्वन्द्व सर्वैक कर्मजोऽनित्य एव च।।

Enumeration is the counting. Combination is the joining together (of two or more entities, for example the drugs); this is of three types :) both the combinants being functional, all the combinants being functional or only one of the combinants being functional. This (state of combinedness, is *per se*) non-eternal (i.e. operative only for a particular condition and is of no universal value). Cs.su. 26. 32.

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विभागस्तु विभक्तिः स्याद् वियोगो भागशोग्रहः । पृथक्त्वं स्यादसंयोगो वैलक्षण्यमनेकता ।।

Division is the dividing (out of one entity) and the separated element (taken out if it) is to be (then) appreciated in parts. Segregatedness is a non-combination (with anything else) and (thus denotes the) uniqueness of an entity (from out of which) (the true) many-ness ensues. Cs. su. 26. 33.

परिमाणं पुनर्मानं संस्कारः करणं मतम् । भावाभ्यसनमभ्यासः शीलनं सततक्रिया ।।

Measure is the assessment of a quantity, Culturing is considered to be the (peculiar) method of preparation (that goes into the making of a proprietory drug for instance, or, a *yoga*). Practising anything constantly is habituation; this is acclamatisation and constant activity.

इति स्वलक्षणैरुक्ता गुणाः सर्वे परादयः । चिकित्सा यैरविदितैर्न यथावत् प्रवर्तते ।।

Thus have been told all the qualities commencing from the "superiority" onwards according to their respective characteristics. By those who do not know them (viz. do not give proper consideration of these aspects or their work), they do not really proceed in their professional work as they should. Cs. su. 26. 35.

गुणा गुणाश्रया नोक्ताः तस्माद् रसगुणान् भिषक् । विद्याद् द्रव्यगुणान् कर्तुरभिप्रायाः पृथग्विधाः ।।

Qualities are not said to reside in (other) qualities. Therefore, when a mention is made of the qualities of a *rasa*, the physician should know that it is the qualities of the drug materials containing the *rasas* that are meant here. (It is likely that) the opinions of the authors (of other works) may be of varied types Cs. su. 26. 36.

अतश्च प्रकृतं बुद्ध्वा देश कालान्तराणि च । तन्त्र कर्तुरभिप्रायानुपायांश्च अर्थमादिशेत् ।।

That is why, the physician should ascertain the opinion and the stratagem of the author of his (selected) treatise in consideration of the patient in question and the several factors concerned such as the relevant place and time (and so on). Cs. su. 26. 37.

some advanced informations

18. भेषजोपक्रमं तस्माद्भगवन् वक्तुमर्हसि । औषधं किमधिष्ठानं कथं चास्योपदिश्यते ।। औषधज्ञौषधत्वं च भेषजत्वमथापि च ।। भैषज्यागदत्वं च कषायत्वं तथैव च । यथा च गौण्येन रसा द्रव्ये द्रव्ये व्यवस्थिताः ।। प्राधान्येन यथा दृष्टो मधुके मधुरो रसः । अम्लः कपित्थे लवणः सैन्धवे नागरे कटुः ।। तिक्तस्तिक्तरोहिण्यां कषायश्चाभयां प्रति । सत्येवं रसनानात्वे संयोगः सर्व एव हि ।। कषायत्वेन निर्दिष्टः कुतः किं चात्र कारणं । कति केचौषधगुणा भेदाश्चास्य कति स्मृताः ।। कति चौषधकालाश्च काले काले च को विधिः । कस्यां कस्यांमवस्थायां पातव्यं भेषजं न वा ।। कथं च पेयं पीतस्य परिहार्यं च किं भवेत् । जीर्यमाणस्य किं रूपं किं च जीर्णस्य लक्षणं । विभज्य वयसस्त्रित्वं कथं कात्रा विधीयते । अधोभागोर्ध्व भागानां दोष संशमनी च या ।। जीवनीया च या मात्रा दीपनीया च या स्मृता । मात्रा संशोधनी या च स्नेह मात्रा च या भवेत् ।। सर्वमेतद्यथा तत्वं कीर्तयस्व महामुने । जातमात्रमुपादाय यावद्वर्षशतं परम् ।।

Revered Sir, you should therefore tell (now,) the original conception (*upakrama* MW.) regarding drugs. What is the basis of medicament ? How to teach about it ?

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(Tell us) the knowledge of medicine, the antidotes, the decoctives; how does a *rasa* exist in diverse drug materials in a low key (in some cases); how is the *rasa* seen to be dominant (in others) as the taste of sweet in *madhuka*, acid in *kapittha*, salt in *saindhava*, pungency in dried ginger, bitterness in *tikta rohiṇi*, astringent in myrobalans; even though there occur many *rasas* in a combination, how is it that this gets called (in still other cases) a (dominating) astringent *rasa* only; what is the reason here ? How many and what are the qualities of medicines; how many are the timings of adminstering medicine ? What is the procedure in giving them in time? In what several stages is the medicine to be given or not to be given ? How is this to be drunk and what protective measures are to be observed after this drinking? What are the signs of the medicine being assimilated, and, after assimilation ? Dividing the entire span of life (from the time of the birth of child to hundred years) into three portions, how is the dosage to be determined ? How do we futher specify this dosage in cases of drugs palliative to infra or supra clavicular regions of the body, or of the life-giving drugs or of what are called the stimulatory drugs or of the purificatory drugs or of the oleatives ? Tell us all about these in their exact principles, O Great sage, commencing from the very birth till to hundred years. Ks. khila. 3.5-14.

अयं हेतुरिदं लिंगमस्य चायमुपक्रमः । इति तावत् परं सूक्ष्मं व्याधिज्ञानं प्रचक्षते ।।
अस्मादपि औषधज्ञानं आहुः सूक्ष्मतरं बुधाः । तदहंतेऽभिधास्यामि कात्स्र्येनैव निबोध मे ।।

This is the cause, *this,* the symptomatic manifestation, *this,* the commencement of the medicial treatment here - in this way, the knowledge of the diseases is spoken about in great subtlity. But the wise say that the knowledge of the medicines is subtler than this even. I shall tell about it to you in its entirety. Listen from me. Ks. khila. 3. 16, 17.

19. मात्रावत् लघुपाकं च हृद्यं दोषप्रवाहणम् ।
अल्पपेयं महावीर्यं प्रीणनं बल रक्षणम् ।।
व्यापत्तौ अल्पदोषं च मन्द ग्लापनमेव च ।
संस्कार गुण संपन्नं राजार्हं भेषजं मतम् ।।

(*categories of drugs*) That which is to be administered in specific dosage, easily assimilable, charming, capable of causing an outflow of the vitiations, to be drunk in small quantity, great in potency, pleasing and protective of strength, causing only little morbidity in case of any mishap, producing only little lassitude, endowed with all the requisite preparatory procedures and qualities - such a mediicine is considered to be fit for the king. Ks. Kahila 3. 31-32.

तद्धि सिद्धिमसिद्धं च शीतमुष्णं द्रवं घनम् । कोष्णं सस्नेहमस्नेहमिति भिन्नमनेकधा ।।
तदामयवयो भेदात् सप्तधैव विभज्यते ।

The well-known - the not so well known, the cold - the hot, the liquid-the solid, the luke-warm, accompanied with oil - not accompanied with oil - that medicine is of many diverse kinds in this way. And this gets divided further into seven kinds on the differences of the disease and the age.

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चूर्णं शीतकषायश्च स्वरसोऽभिषवस्त या। फाण्टः कल्कस्तथा क्वाथो यथावत् तं निबोध मे।।

Powder, Infusion, Expressed juice, Distillation, Filtrate, Paste and Decoction, listen to these (seven forms of medicine) exactly as they are, from me. Ks. k. hila. 3. 33-35.

सप्तधैवं विभज्यैतद्दशधा प्रविचारयेत्।
पूर्वं भक्तस्य मध्येऽधः समुद्गं समुहुर्मुहुः।।
सभक्तं भक्तयोर्मध्ये ग्रासग्रासान्तरे परः।

Classifying that into seven (as above), it should be applied in ten forms : before-meals, in the middle of the meals, after meals, before and after meals, again and again, along with the meals, between two meals, along with a morsel (of food, during the meals) or in between two (such) morsels. Ks. khila. 3 43. 44.

20. भेषजं द्विविधं च तत्। स्वस्थस्योर्जस्करं किंचित् किंचिदार्तस्य रोगनुत्।।

(categories) There are two types of medicines : invigorative and disease-destroying. Some are invigorative to the healthy, and some are the removers of the disease. Cs. ci. i.4

उभयमपि च उभयात्मकम्।
बाहुल्येन तु निर्देशः तत्रोर्जस्करं द्विविधं रसायनं वाजीकरणं च।
रोगघ्नमपि द्विविधम्- रोगस्य प्रशमनमपुनर्भवकरं च।

Both, of these, (however) are acting in both the ways; (but the specific) indication (is obtained, by noting which is) more plentiful. Therein, the invigorative is of two kinds - elixirising and virilifying. The disease destructive is also of two types : paliative of the disease and what causes no reappearance of the disease (immunising ?). A samg. su. 12. 3

पुनश्च द्विविधम् द्रव्यमद्रव्यं च।
तत्र द्रव्यं त्रिविधं-भौममौद्भिदं जंगममिति। अद्रव्यं पुनरुपवासानिलातपच्छाया मंत्र सान्त्व दान भयो त्रासक्षोभण हर्षण भर्त्सन स्वप्न जागरण संवाहनादि।

This is again, of two types : material and non-material. The material is of three kinds : the mineral, the plant and the animal. The non-material are : fasting; (exposing oneself to) winds, sunlight or shade; (using) incantations, consolatory measures; (giving) gifts; (subjecting the patient to) fear, tormentation, agitatedness, delight and hilarity, chiding, sleep, wakefulnes, massaging and the like. A samg. su. 12. 4.

तत्पुनर्द्विविधम्- व्यपाश्रयभेदात् दैवयुक्ति व्यपाश्रयं चेति।

This is again, of two types : on the basis of the diversity of the resort; resort is to gods or to the stratagems (of drugs, etc.). A samg. su. 12.5

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त्रिविधमौषधम्-दैव व्यपाश्रयं युक्ति व्यपाश्रयं सत्वावजयश्च। तत्र दैव व्यपाश्रयं मन्त्रौपधि मणि मंगल बल्युपहार होम नियम प्रायश्चित्तोपवास स्वस्त्ययन प्रणिपात गमनादि। युक्ति व्यपाश्रयभाहारौषध योजनादि। सत्वावजयः पुनरहितान्मनोनिग्रहः।

Medicines are of three kinds : resorting to gods, resorting to stratgems and controlling of the mind. Therein, resorting to the gods, is the using of incantations, (talismans like) beads, auspicious rites, sacrifices, offerings, oblations and the following of religious vows, benedictory words, falling down in salutation and going to pilgrimages. Resorting to stratagems is the use of (the suitable) foods, medicines and the like. Controlling of mind is to restrain (one's) mind from going after unwholesome objectives. A. samg. su. 12. 5

पुनरपि च त्रिविधम्-अपकर्षणं प्रकृतिविधातनं निदान त्यागश्चा ते पुनरपकर्षणादयो द्विविधा बाह्याऽभ्यन्तर भेदेन। तत्र बाह्यमपकर्षणं ग्रन्थ्यर्बुदोपपक्ष्म कृमि शल्यादिषु शस्त्र हस्त यन्त्रादिभिः। अभ्यन्तरं पुनर्वमन विरेचनादिभिः। प्रकृतिविघातनं संशमनम्। तद् बाह्यमभ्यंग स्वेद प्रदेह परिषेकोन्मर्दनाद्यम्। अभ्यन्तरं यदन्तर मनुप्रविष्याऽविक्षोभयद्दोषान् शमयति। निदान त्यागो यथा दोषं शीतोष्णासन व्यायामादीनां वर्णनं स्निग्ध रूक्षाद्यभ्यवहारश्च।

This is again of three kinds : detractive, denaturing and abandoning of the causative (factor). Detractives and the like are of two kinds, by the difference (of being) external and internal. External detraction is (as it is done, in cases of) glandular swellings, tumours, additional eyelid, worms and surgically removables, by means of surgical instruments, hands, machines and the like (*in all of which cases, the pathological structures or agents are completely detracted or removed out of the body by external means*). Internal (detraction) is by (a similar removal by internal medications such as) emesis, purgatives and the like. Denaturing is paliation (*of the disturbing agent*). This, (when) external, (is) oil bath, sudation, unction (smearing - *with a paste, poultice oil*), fomentation, rubbing (of the body) and the like; (when) internal it paliates, after entering within, not destroying the vitiation. Abandoning of the causative is the giving up in accordanc with the vitiation of cold and hot (agents) sedantariness, (phyical) exercises and the like and taking a food that is unctuous or dry and so on. A. samg.su. 12.6

21. देशभेदेन गुण भेदः हैमवतमौषधं सौम्यं पथ्यं च। वैन्ध्यं भेषजमाग्नेयम्।

(*geographical diversity in pharmacological activity.*) Difference in quality occurs because of difference in the region (of the drugs). Himalayan drug is mild and salutary. Vindhya drug is violent (lit. fiery). A. samg. Ka. 8.

22. योग्यमपि च औषधमेवं परीक्षेत- इदमेवं रसदीर्य विपाकमेवं गुणमेवं द्रव्यमेवं कर्मैवं प्रभावमस्मिन् देशे जातमस्मिन्नृतावेवं गृहीतमेवं निहितमेवं निषिद्धमेवं उपसंस्कृतमेवं संयुक्तमनया मात्रया एवं विधस्य काल एतावन्तं दोषमपकर्षति उपशमयति वा। तथा तेन अनेन वा विशेषेण प्रयुक्तमिदमकरोत्।

(*examination of the drug* :) Even if suitable, a drug has to be (further) examined as follows : that, this (drug) is of *this* (pharmacognostic) nature, *these* are its specialities of taste, potency and post-assimilatory effect, *this* is its quality, its crude-drug material is of *this* (physical) nature, its activity is *this*, its place of storage has been *this*, it is proscribed (in a case) *thus*, its further culturing has

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been *thus* and, if combined with *this* dosage, *this* way and for *this* much time, it will *remove* out the vitiation or *homologate* it. A. samg. su. 23.8.

23. चूर्ण शीत कषाय स्वरस अभिषव आसुतक्रिया फाण्ट कल्क क्वाथ भेदेन औषध कल्पः सप्तधा।

(*pharmaceutical forms* :) (Pharmaceutical) diversities of the formulation of the drugs is seven fold : powder, cold infusion, expressed (fresh) juice, distilation or brewing, *filtrate*, paste and decoction. Ks. khila. 3 33. 35.

24. एकोऽपि ह्यनेकां संज्ञां लभते कार्यान्तराणि कुर्वन् तद्यथा पुरुषे बहूनां कर्मणां करणे समर्थो भवति स यद्यत्कर्म करोति तस्य तस्य कर्मणः कृर्तकरणकार्यसंप्रयुक्तं तत्तद् गौणं नामविशेषं प्राप्नोति तद्वत् औषध द्रव्यमपि द्रष्टव्यम्।

Though single, a drug will attain more than one apellation, when it carries out (its) diverse actions (in the body). This is like a single person who is capable of carrying out many actions and whenever he does any one particular act (among them), he will get special apellation (on that account)-viz., as an agent, an instrument or an action (in itself). Drug material also should be considered as being similar to this (situation).

यदि चैकमेव किंचित् द्रव्यमासादयामः तथागुण युक्तं यत्सर्वकर्मणा करणे समर्थं स्यात् कस्ततोऽन्यदिच्छेत् उपधारयितुमुपदेष्टुं वा शिष्येभ्य इति।

If (on the contrary) we can secure a single drug material which has such a quality as to be capable of bringing all (the pharmacological actions, we desire), who will then desire to consider or teach anything else to his students. Cs. su. 4. 22.

25. तच्च नित्यं प्रयुंजीत स्वास्थ्यं येन अनुवर्तते। अजातानां विकाराणामनुत्पत्तिकरं च यत्।।

(*diet and drug*) That diet should be taken daily by which, health follows naturally and which (in addition) does not produce diseases that have not (yet) arisen (viz., acts as a prophylactic aganist disease in future). Cs. su. 5.13.

26. आशु शुध्यर्थं प्रतिपक्षमौषधम्- यथास्वलक्षणैः कर्मभिश्च बुद्ध्याऽपि दोषमवगमयेत्।
तद्यथा किमाहारेण कुपितो वायुः किं विहारेण तथा रूक्षेण लघुना शिशिरेणन वा साहसेन वेगरोधेन वा भयेन शोकेन वेति। ततश्च प्रतिपक्षमेवौषधं प्रयुज्यमानमाशु सिद्धये सम्पद्यते। तत्र मधुराम्ल लवणा रसाः कटुतिक्त कषायाश्च इतरेतर प्रतिपक्षाः।

(*counteracting drug for immediate cleansing*) (The physician) should (first) comprehend the morbidity (in question) on the basis of the peculiar characteristics (concerned), activities and also by his own intelligent reasoning. This is as follows:-
Is the *vāyu* provocated because of the food, is it by the particular pastime (of the patient) or is it by rough and light (food) or cold or any adventuristic act or by suppression of any natural urge or by fear or by grief and so on. If only then a counteracting medicine is employed the success is immediate. Therein for instance sweet, acid and , salt (tastes) and bitter, pungent and astringent (tastes) are mutually counteracting. A . samg. su. 23. 3

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27. शुक्रहा बद्धविण्मूत्रो विपाको वातलः कटुः । मधुरः सृष्ट विण्मूत्रो विपाकः कफं शुक्रलः ।
पित्तकृत् सृष्ट विण्मूत्रः पाकोऽम्लः शुक्रनाशनः । तेषां गुरुस्यान्मधुरः कटुकाम्लावतोऽन्यथा ।।

(*clinical effect of vipāka*) The material which is bitter in *vipāka* destroys the semen, obstructs stools and urine and augments *vāta* . The sweet *vipāka* releases stools and urine and augments *kapha* and semen. The acid *vipāka* provokes *pitta,* releases stools and urine and destroys semen. Among these, sweet is heavy, while bitter and acid are contrary viz. light. Cs. su. 26. 61, 62.

प्रकृष्टो भावः प्रभावः शक्तिः ।

(*efficacy or power or prabhava*) The eminent state (of a drug) is its efficacy or power. CS. vi. 1.4.

ययोर्दव्ययोः रसवीर्य विपाकानां समानत्वमस्ति कर्मणां च विशेषो लक्ष्यते तत्र विशेषकर्मकारी द्रव्यनिष्ठो धर्मः ।

That nature innate in a drug material because of which, a speciality is seen in its action when two materials (viz., this and the other one) are equal in their (other factors of) taste, potency and post-assimilatory effect is prabhava . Cs. su. 26. 67

सर्वाति शायी द्रव्यस्वभावः ।

That nature of the drug material which is preeminent amongst all (of its actions). As. su. 17.

28. ऊर्जः प्रशस्तभावः तत्करं साधनमर्थात्स्वस्थत्वेन व्यवहियमाणस्य पुंसो जरादि स्वाभाविक व्याधिहरं तथा अप्रहर्ष व्यवाय क्षयितालप्प शुक्रत्वाद्यप्रशस्त शारीर भाव हरम् ।

(*invigoratives - ūrjaskara bhesaja*) Vigor (or energy) is a state of excellence, causing that; or in other words if being used by a healthy person, it would destroy old age and other natural diseases, simultaneously destroying non-excellent states of the body such as lack of joy, decline in cohabitation, smallness in the quantity of the semen and the like. Cakra Cs. vi. 1.4.

समत्यके धातुरिव निषिक्तः पुरुषः पुरुषमभिनिर्वर्तयति गौर्गामश्वाऽश्वमेवादि । नृणामपि तु मध्ये गर्भनिर्वृत्तिः । तत्र द्व्योदम्पत्योः स्वभावात् स्वकर्म परिणामाद्वा प्रजाभिवृद्धिर्भवति तौ धन्यौः अतोऽन्यथा भिषजितव्यौ ।

Just as a (molten) metal poured in a mould (produces a form exactly similar to itself), so does a human person produce a human person (only), and so does a cow, a cow and a horse, a horse and so on. In human beings, there is a birth from the uterus. Therein from out of a couple of the husband and the wife by nature or by effect of their *karma* , there occurs the generation of an offspring. They are blessed. If this is not so, they are (both) to be treated medically (for this impotency). Ks. sa. 5.3.

f. *medicines*

29. चिकित्सितं व्याधिहरं पथ्यं साधनमौषधम् । प्रायश्चित्तं प्रशमनं प्रकृतिस्थापनं हितम् ।। विद्यात् भेषज नामानि ।

(*activities*) 'Used for treating a disorder', the 'remover of the disease', the 'salutary' the ' means (for curing)' 'the drug', 'the redress', the 'palliative,' the 'restorative'

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and the 'wholesome (agent)' - these are the different names of medicine (viz., these constitute the qualities and the therapeutic activities that a medicine is expected to possess). Cs. ci. 1.3

30. भेषजं द्विविधं च तत्। स्वस्थस्य ऊर्जस्करं किंचित् किंचिदार्तस्य रोगनुत्।।
अभेषजं च द्विविधं बाधनं सानुबन्धनम्। स्वस्थस्य ऊर्जस्करं यत्तुतद् वृष्यं तद्रसायनम्।।

(*categories*) This medicine (which should possess these several specified properties) is of two kinds : one kind; that is promotive of vigour in the healthy, the other, that is destructive of disease in the ailing. The opposite of medicine is also of two kinds : one causing immediate disorders and the other, causing remote ill effects. What is stated as promotive of vigour in the healthy is, in the main, virilific and vitalising. Cs. ci 1. 4,5

पुनरपि च त्रिविधम्-अपकर्षण प्रकृतिविधातनं निदानत्यागश्च ते पुनरपकर्षणादयो द्विविधा बाह्याभ्यन्तर भेदेन। तत्र बाह्यमपकर्षणं ग्रन्थ्यर्बुदोपपक्ष्मकृमि शल्यादिषु शस्त्रहस्त यन्त्रादिभिः। प्रकृति विघातनं संशमनम्। तद्बाह्यमभ्यंग स्वेद प्रदेह परिषेकोन्मर्दनाद्यम्। अभ्यन्तरं यदन्तरमनुप्रविश्य अविक्षोभयद्दोषां क्रमयति। निदानत्यागो यथा दोष शीतोष्णासनव्यायामादीनां वर्जनं स्निग्ध रूक्षाद्यभ्यवहारश्च। तत्र शस्त्रादिसाध्ये भेषजमनुक्रमते न तु भेषज साध्ये शस्त्रादि।

(The medicines) are once again of three kinds : detractive (removing away), destruction of the natural obstacles and renunciative of the disease causatives. These detractives and the like are of two kinds, by the difference (as to whether they are) external or internal (in action). The external detractive is : (the removal of) the (externally seen) glandular swellings, the tumors, the (secretions on the) eyelashes, the worms and the surgical removables by means of surgical instruments, hand, the machines and the like. The internal detractive is ; emesis, purgation and the like. Destruction of the natural obstacles is alleviation : this is: external - bathing, sudation, anointment, sprinkling, massaging and the like; the internal - is what enters inside and quietens a morbidity without itself agitating (anything else). Renunciative of the disease causatives is ; the giving up of cold, heat, sedentary habit, physical exercises, etc. depending upon the vitiation concerned as well as the taking up of the (foods that are) unctuous, dry and the like. Therein, a medicative measure is commenced in the beginning of (even) the surgically curable (disease); but not, a surgical measure and the like, in what is curable by medication. As. su. 12. 6

अथातः पुरुषनिचयं शारीरं व्याख्यास्याम इति हस्माह भगवानात्रेयः।
रसजः पुरुषः व्याधयश्च-
इह खलु भो अयमन्नात्पुरुषो भवति। रसजन्मानोऽस्य व्याधयो भवन्ति।
तद्यथा खलु अयं पुरुषो रसजन्मा रसजीवी रसज्वलनो रस समाधिको रस जीवनश्च भवति।
रसा नाम सम्यगुपयोगान्मिथ्यायोगात् तद्विकारानृच्छति।
न कश्चिन्मिथ्योपयोगादजीर्णापथ्य भोजनात् स्वस्थो भवति।

"From now onwards we shall comment upon the science of the body on which a person is rerected"thus said ervered Atreya.

"The person as well as the diseases (he suffers from) are born of the nutritional essence or the rasa".

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O ye all, know that this purusa or the person comes into existence on the (basis of the) food (he consumes). For this (person) born on the rasa, diseases come about. This is as follows : This person is born of rasa, lives in rasa, becomes effulgent due to rasa; is set right by rasa and his whole livlihood is a rasa. By using the rasas improperly or wrongly, they get deranged. No body will become healthy by wrong or misuse of rasa or by indigestion or by taking meals that are not salutary. Bhela. sa. 4.1.

पुनरपि त्रिविधम्-हेतुविपरीतं व्याधिविपरीतं उभयार्थकारि च। तत्र हेतु विपरीतं गुरुस्निग्ध शीतादिजे व्याधौ लघुरूक्षोष्णादि तथेतरस्मिन्नितरत्। व्याधिविपरीतं द्वै मूलोपक्रमौ तौ च स्नेह स्वेदौ लंघन बृंहणे पंचकर्माणि वमनादीनि सधूप धूमांजनादीनि च। तथा विम्लापनोपनाहन पाटनादीनि। उभयार्थकारि पुनर्दैव व्यपाश्रयमौषधम्।

(The medicines) are once again of three kinds : contradictory to the causative (of the disease i.e. allopathic), contrary to the disease and serving both the purposes. Therein, the causative contrary (is the using of) the light, the dry, the hot and the like (medicative measures) in the diseases born to (the use of) the heavy, the unguent and the cold (factors), and so forth in other circumstances similarly. The disease contrary are basically of two procedures : (i) inunction, sudation, the five medicative measures of emesis and the like, aromatic vapour (fumigation), smoking (i.e. sternutation,), colliyrium and the like. (ii) pressing and wiping all (the pus etc.), application of poultice, splitting (a wound) and the like. The drug that has a trust in God (as well), serves for both the purposes.

त्रिभिर्यामैर्मध्यमाग्ने र्भेषजस्य पाकः।
जीर्यत्काललक्षणम्- जृम्भाशब्द द्वेष मुख शोषाऽरति क्लम तन्द्रा उद्वेष्टनं हस्तपादानाम् आलस्यं चेत्येतानि जीर्यति भेषजे लिंगानि भवन्ति।

In a patient of medium digestive strength, the drug given takes three *yamas* (i.e. nine hours) to get assimilated (and commence its action). Da. Su. ci. 33. 36.

The characteristics when the medicine is digested :yawning, intolerance to sound, desiccation of the face, disinterest, weariness, lassitude, cramps at the hands and the feet, laziness - these are symptoms when the medicine gets digested. Da. Khila 3.69.

31. मात्रावल्लघुपाकं च हृद्यं दोष प्रवाहणम्।
अल्पपेयं महावीर्यं प्रीणनं बलरक्षणम्।।
व्यापत्तौ अल्पदोषं च मन्दग्लापनमेव च।
संस्कार गुण संपन्नं राजार्हं भेषजं मतम्।।

(*how to give medicines to royal persons*) One should employ that medicine which is made up according to the measures prescribed, light on its digestion, pleasant, alleviative of the morbidity, effective even in small dose, powerfully virile, gratifying, protective of the strength, (itself) conferring (only a) little vitiation, non-fatiguing, and endowed with (all) the qualities of (the right) preparation. Ks. khila. 3.31-33.

अनन्य कार्योऽवहितो मन्त्रिगुरुसम्मतं सर्वगुण संस्कार संपन्नमौषधं आस्वादित पूर्व परिचरैः खयमनुप्रयोजयेत्।

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Not doing any other work, with all the attention and taking the approval of the ministers and the preceptors, the physician should himself adminster (to a royal person) the medicine endowed with all the qualities and after it has been tasted first by the attendants. As. su. 23. 33-35.

उभयमपि च उभयात्मकम्। बाहुल्येन तु निर्देशः तत्रोजस्करं द्विविधं रसायनं वाजीकरणं च। रोगघ्नमपि द्विविधम्-रोगस्य प्रशमनमपुनर्भवकरं च।

(Actually however), both the two kinds of medicines (i.e. the invigorating and the disease distructive) carry out both of these functions (i.e. invigoration as well as destruction of a disease). It (still) gets a specific designation depending on which (of these two) functions it carries out more plentifully. The invigorating (kind) therein is of two kinds : elixirisation and virilification. The disease destructive (kind) is also of two kinds : alleviative, of the disease and prophylactic (lit. not making it to come again). As. su. 12. 3

पुनश्च द्विविधय् द्रव्यमद्रव्यं च। तत्र द्रव्यं त्रिविधम्-भौममौदिभदं जंगममिति। अद्रव्यं पुनरुपवास अनिलातपच्छाया मन्त्र सान्त्व दान भयोत्रास क्षोभण हर्षण भर्त्सन स्वप्नजागरण संवाहनादि।

(The medicines) are again of two kinds: material and non-material. The material is of three kinds, mineral, animal and vegetable. The non-materials are fasting; (exposure to) wind; sun (bathing) and shade; incantation and giving consolation; (in cases of mental troubles:), frightening, tormenting, (purposeful) agitation, exhilaration and chiding; sleep, wakefulness, massaging and the like. As. su. 12. 4

उत्तरोत्तरासु वयोऽवस्थासु उत्तरोत्तरा भेषजमात्रा विशेषा भवन्ति।
अल्पमात्रत्वे सत्यपि प्रशस्तमहावेगं बहुदोषहरं सुखकरं पाके लघु आस्वादने सुखकरं प्रसन्नकरं रोगघ्नं व्यापत्तावपीषद् विकारकारि नातिग्लानिकरं गन्धवर्ण रसोपेत यदौषधम् तन्मात्रावज्ज्ञेयम्।

The more advanced the age and the stage (of the disease), the greater is the speciality of the dosage of the medicine prescribed Ss. su. 35-30. The medicine to be given in the proper dosage is to be known as that which even though in small dosage is extolled as being of great speed (in action), destructive to many morbidities, comfortable, light in assimilation, comfortable in taste, gratifying, destructive of the disease, least deranging even in *vata* and *pitta* (vitiations), not very much tiresome and endowed with the (requisite) aroma and colour. Cs. si. 6. 95. 96.

g. (*some medicative preparations*)

32. यथाऽणुरग्निस्तृण गोमयाद्यैः संधुक्ष्यमाणो भवति क्रमेण।
महान् स्थिरः सर्वंपचस्तथैव शुद्धस्य पेयादिभिरन्तरग्निः।।

Just as a low fire becomes kindled up gradually by hay and cowdung, so does the inner (gastric) fire become great, steady and all tolerating and consuming for a person purified (by *pancakarma*) by means of the (specially prepared) drinks and the like (such as the *yavagus*). Cs. si. 1.55

(*Yavagu - medicated gruels 28 in number as stated in Cs. su. 2. 17-35*)

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33. पंचविधं कषायकल्पनमिति तद्यथा-पंच कषाय योनय इति मधुर कषायोऽम्ल कषायः कटुकषायस्तिक्तकषायः कषायकषायश्चेति तन्त्रे संज्ञा।

(decoctives) *five sources.* There are five sources for decoctives, such as, sweet decoctive, acidic decoctive, bitter decoctives, pungent decoctive and astringent decoctive - thus are they designated in this technical treatise - Cs. su. 4. 66

पंचविधं कषायकल्पनमिति तद्यथा-स्वरसः कल्कःश्रृतः शीतः फाण्टः कषाय इति। यन्त्र निष्पीडिताद् द्रव्याद्रसः स्वरस उच्यते। वह्नौ तु क्वथितं द्रव्यं श्रृतमाहुः चिकित्सकाः। द्रव्यादापोथितात्तोये तत्पुनर्निशि संस्थितात्। कषायो योऽभिनिर्याति सशीतः समुदाहृतः।। क्षिप्त्वोष्ण तोये मृदितं तत् फाण्टं परिकीर्तितम्। तेषां यथापूर्वं बलाधिक्यम् अतः कषाय कल्पना व्याध्यातुरबलापेक्षिणी न तु एवं खलु सर्वाणि सर्वत्रोप योगीनि भवन्ति।

There are five kinds of preparation of (these) decoctives, as follows : expressed juice, paste, decoction, cold infusion and hot infusion. Expressed juice is so called, as it is a liquid obtaines by pressurising the material under a machine. That which (remains as a) bulk material after the juice is expressed out, *that* is called, the paste. The physicians consider the material boiled on fire along with other materials (such as water, milk etc.) as a decoction. The decoction that comes out when what is squeezed out from the (pounded) material is kept overnight in (cold) water, is referred to as cold infusion. What is softened by throwing it in hot water (after pounding it) is considered as hot infusion. The degree of strength of these (five types) is greater in what is earlier (in this list). Now, the formulation of the decoctive (in any given case) is dependent upon the strength of the disease and the patient. It is not that all (decoctives) are useful in all cases. Cs. 4.7.

पंचाशन्महाकषाया इति यदुक्तं तदनुव्याख्यास्यामः तद्यथा-जीवनीयो बृंहणीयो लेखनीयो भेदनीयः संधानीयो दीपनीय इति षट्कः कषायवर्गः, बल्यो वर्ण्यः कण्ठयो हृद्य इति चतुष्कः कषायवर्गः, तृष्ठिघ्नोऽर्शोघ्नः कुष्ठघ्नः क्रिमिघ्नो विषघ्न इति षट्कः कषायवर्गः, स्तन्यजननः स्तन्यशोधनः शुक्र जननः शुक्र शोधनः इति चतुष्को कषाय वर्गः, स्नेहोपगः स्वेदोपगो वमनोपगो विरेचनोपग आस्थापनोपगोऽनुवासनोपगः शिरोविरेचनोपग इति सप्तकः कषायवर्गः, छर्दिनिग्रहण स्तृष्णा निग्रहणो हिक्कानिग्रहण इति त्रिकः कषायवर्गः, पुरीप संग्रहणीयः पुरीष विरजनीयो मूत्र संग्रहणीय मूत्रविरेजनीयो मूत्र विरेचनीय इति पंचकः कषाय वर्गः, कासहरः श्वासहरः शोथहरो ज्वर हरः श्रमहर इति पंचकः कषाय वर्गः दाहप्रशमनः शीतप्रशमन उदर्द प्रशमनोऽङ्ग मर्द प्रशमन शूल प्रशमन इति पंचकः कषाय वर्गः शोणित स्थापनो वेदनास्थापनः संज्ञास्थापनः प्रजास्थापनो वयःस्थापन इति पंचकः कषाय वर्गः। ...तेषां एकैकस्मिन् महाकषाये दशदशावयविकान् कषायाननु व्याख्यास्यामः तान्येव पंचकपाय शतानि भवन्ति।

(*pharcological categories*) We shall now comment in detail upon what we said as there being five hundred great decoctives; these are as follows: vivifying or restorative, roborant or weight promotive, revulsive or weight reducive, purgative, healing or union promotive, stomachic - digestive - thus (there is) a category of six decoctions (of specifically different pharmacological actions); strengthening or tonic, colourative or complexion-promotive, voice promotive and cardiac tonic - thus, a category of four decoctions; satiation killer or appetiser, anti hemorrhoidal, curative of dermatosis, antipruritic, anthelmentic, and poison destructive or antidote - thus, a category of six decoctions; galactogoguic, galacto-purifying, semen promotive or spermeo-poietic, semen or sperms purifying, - thus, a category of four decoctives; useful in oleation therapy or oleative or adjuvant in oleation therapy,

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adjuvant in sudation therapy, adjuvant in emetic therapy, adjuvant in purgative therapy, adjuvant in non-oily enema, adjuvant in oily enema and adjuvant in errhines - thus, a category of seven decoctives; intestinal astringent, corrective of faecal pigment, urinary astringent , corrective of urinary pigment and diuretic - thus, a category of five decoctives; anti-cough or bronchial sedative, bronchial antispasmodic, anti dropsy, anti pyretic, anti fatigue or acopic, thus a category of five decoctives; anti burning-syndrome or refrigerant, anti cold-syndrome or colefacient, anti urticarial, restorative and analgesic (or, palliative of burning, cold, urticaria, pressings of the body and pain), thus, a category of five decoctives; haemostatic, pain-stabilising or anadyne, sensibility stabiliising or recusitative, stabilising the offspring or procreant, stabilising age or rejuvenative, thus a category of five of decoctives.

In every one of these great categories of decoctives we shall comment in detail of ten members (of plants); it is these (latter) only that become ten hundred decoctives (in totality). Cs. su. 4. 8.

न हि विस्तरस्य प्रमाणमस्ति, न चापि अति संक्षेपोऽल्पबुद्धीनां सामर्थ्याय उपकल्पते, तस्मादनतिसंक्षेपेण अनतिविस्तरेण चोपदिष्टाः ।

एतावन्तो हि अलं अल्पबुद्धीनां व्यवहाराय बुद्धिमतां च स्वालक्षण्य अनुमान युक्ति कुशलानामनुक्तार्थज्ञानाय इति ।

(We can increase their number further, but will stop here with 500, for) there is no limit for extensiveness. And, (if we restrict ourselves instead to) extreme brevity it will not be adequate to fulfil the needs of the (physicians of) small intellect. That is why this (aspect) has been taught (here) in neither too brief nor too extensive a manner. This much is believed to be enough for the professional activity of the (physicians of) small intellect as well as the intelligent to understand the meaning (needed but) not expressly stated, and those who are experts in inferring (based on the) general characteristics (stated) and devising (further combinations to suit their specifice needs according to the case concerned). Cs. su. 4. 20.

B. *Pharmacognosy.*

(In modern pharmacy, pharmacognosy or, the science of drugs, occupies a key position. This concerns with aspects of great importance in practice, such as correct recognition of crude drugs, manitenance of purity, avoidance and appraisal of adulteration, procurement and other commercial aspects of drug trade. An important idea given due value of late is as follows. The active principles of the drug plants are normal products of biosynthessis which is a part of their physiology. As such, due consideration to the state of the health of the plants, the place of their growth and the influence of climate should be given . It is of interest to find some parallel ideas of this nature in Susruta. The account given below in the words of Susruta wil certainly indicate the analogous care with which the plants were collected then).

a. *soils and plants* :

1. अथातो भूमिप्रविभागीयमध्यायं व्याख्यास्यामः ।

We shall now comment upon the Chapter on the categories of the (soils of the) earth.

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श्वभ्र शर्कराश्मविषम वल्मीक श्मशानाधातन देवतायतन सिकताभिरनुप हताम् अनूपरां अभंगुरां अद् रोदकां स्निग्धां प्ररोहवतीं मृद्वीं स्थिरां समां कृष्णां गौरीं लोहितां वा भूमिं औषधग्रहणाय परीक्षेत।

तस्यां जातमपि कृमिविष शास्त्रातप पवन दहन तोय संबाध मार्गैरनु पहतं एकरसं पुष्टं पृथ्ववगाढमूलं उदीच्यां च औषधमाददीत इत्येष भूमिपरीक्षा विशेषः सामान्यः।

Investigate for collecting the drug plants (from the wild), whether the soil (on which they are growing) is not afflicted with holes and chasms and fissures, unevenness, gravels, stones and ant-hills (or whether it forms a part of such unsuitable areas us) cremation or burial grounds, places of capital punishment, temples and (dry, plain) sands. (Observe and take care that the soil you select from, is) non-saline, non-fragile or non-brittles and (is) not (situated) far away from water. (Instead), it should be adhesive and amiable (and be) sustaining much (other) vegetation (as well). (It should be) soft and pliant, firm, even, black, white or reddish. Even among those (medicinal plants) that grow in such types of soil, a further investigation is needed to see that the plant selected is (itself) not afflicted with worms, poisons (e.g. fumes), injuries by cuts, etc. (e.g., of being lopped down for forage), (too much) sun or wind, burning, water clogging or way side grazing. And, (the specific individual plant) you select should be abundant in any particular *rasa* (that you are concerned with); (this should moreover be) well nourished, well grown, deep rooted and (preferably growing in the eastern direction. These are the specifications in general that are to be considered (when plants are to be gathered for medicinal purposes). Ss. su. 36, 1, 3

(i) *a pancabhautic classification of the soils*

2. विशेषतस्तु तत्र, अश्मवती स्थिरागुर्वी श्यामा कृष्णा वा स्थूल वृक्ष शस्य प्राया स्वगुण भूयिष्ठाः स्निग्धा शीतला आसन्नोदका स्निग्ध शस्यतृण कोमल वृक्षप्राया शुक्लाऽम्बु गुण भूयिष्ठाः

नाना वर्णा लघ्वश्मवति प्रविरलाल्प पाण्डु वृक्षप्ररोहा अग्निगुण भूयिष्ठा,

रूक्षा भस्म रासभवर्णा तनुवृक्षाल्प रस कोटर वृक्षप्राया अनिल गुण भूयिष्ठाः

मृद्वी समा श्वभ्रवत्यव्यक्त रस जला सर्वतोऽसारवृक्षा महापर्वत वृक्षप्रायाश्यामा च आकाशगुण भूयिष्ठा।

A (further) special consideration here is (as follws). If the soil is pebbly, firm, heavy, dark, blue or black, and is well grown with big sized trees and rich vegetation, its general property is that of the *pṛthvi* itself. If the soil is unctuous, cool, very near the water and has a vegtation of close-knit grass, tender and small sized trees and is white (in clour), the soil is of the property of *ap*. The soil of variegated colours, containing small sized stones, and having a vegetation of very scanty, small sized and whitish trees, abounds in the property of *agni*. Rough, ashy, greyish-coloured like a donkey, and supporting a vegetation of small trees with little juice in them and full of hollows, such a soil abounds in the property of *vayu*. Soft and pliant, even, having chasms and fissures, with no clear cut *rasa* or water (vicinity), and supporting a vegetation of trees which are having no essence in any way or of the trees of the lofty mountions, such a soil is of the property of *ākāśa* Ss. su. 56.4

(In consonance with the general idea that anything material in the universe is made up of the five great Elementals, probably varying in preponderance in different situations and thereby being resonsible for further categorisation, soils are also classified as coming under five great groups, *pṛthivi, ap,* etc. It will be interesting to

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speculate, specially since the variation in the vegetation supported is also alluded to here, whether we can equate these soils respectively to mesophytic (*pṛthvi*), aquatic (*āp*), dry arid and xerophytic (*agni*), soil of the mountainous slopes (*vāyu*) and soil of the Alpine and the Himalayan type (*ākāśa*).

(ii) *climate and its effect on the efficacy of the drug plants*

3. अत्र केचिदाहुराचार्याः - प्रावृड्वर्षा शरद्धेमन्त वसन्त ग्रीष्मेषु यथा संख्यं मूल पत्रत्वक् क्षीरसार फलानि आददीतेतिः तत्तु न सम्यक्, सौम्याग्नेयत्वात् जगतः ।

सौम्यान्यौषधानि सौम्येषु ऋतुषु आददीत, आग्नेयानि आग्नेयेषु एवमव्यापन्न गुणानि भवन्ति।

सौम्यान्यौषधानि सौम्येषु ऋतुषु गृहीतानि सोमगुण भूयिष्ठायां भूमौ जातानि अति मधुर-स्निग्ध शीतानि जायन्ते।

एतेन शेषं व्याख्यातम्।

Here some experts opine : take the root, the leaf, the bark, the latex, the pith and the fruit, respectively in the seasons of *pravṛed* (rain) *śarad, hemanta,* spring and summer. This is not correct. (Why ?) The world as a whole is either mild or severe (as already indicated). The mild drugs should be collected in the mild seasons, the strong drugs in the *agneya* seasons (i.e., seasons which are themselves violent). In this way (i.e. if you adopt this precaution) the drugs will not be having their qualities deranged (from the optimum or the best possible, which is the ideal). The *saumya* or mild drugs collected in the *saumya* (mild) seasons and (from plants that have) grown in a soil abounding in the qualities of *soma* (i.e.,, mildness) will be by their nature itself very sweet, unctuous and cool. So do all the other qualities of the drugs behave respectively. Ss. su. 36. 5

(iii) *soil types and the diversity of the drug action*

4. तत्र पृथिव्यम्बु गुण भूयिष्ठायां भूमौ जातानि विरेचन द्रव्याणि आददीत, अग्न्याकाशमारुत गुण भूयिष्ठायाम् वमन द्रव्याणि, उभयगुण भूयिष्ठायामुभयतो भागानि, आकाश गुण भूयिष्ठायां संशमनानि, एवं बलवत्तराणि भवन्ति।

Therein, collect the purgative drugs from the plants born in the soils abounding in *pṛthvi* and *ap* qualities, emetic drugs from where the properties of *agni, akasa* and *vāyu* abound; the drugs that cleanse both supra and the infra (clavicular) regions, from where the properties of both (these two sets) abound; the pacificatory drugs, from where the property of *akasa* (alone) abounds. (If you collect your drugs) in this way, the drugs become more powerful (than otherwise). Ss. su. 36.6

(iv) *a general note for collection*

5. सर्वाण्येव च अभिनवानि अन्यत्र मधु घृतगुड पिप्पलीविडङ्.गेभ्यः ।
विडङ्.गं पिप्पली क्षौद्रं सर्पिश्चाप्यनवं हितम्।
शेषमन्यत्वभिनवं गृह्णीयात् दोष वर्जितम्।।

All the drugs should be collected fresh, excepting honey, ghee, jaggery, *pippali* and *viḍanga*. These latter are wholesome when they are not new. All the rest should be collected afresh and (in such a state that they are) without any blemishes.

भवन्ति चात्र -
गोपालास्तापसा व्याधा ये चान्ये वनचारिणः । मूलाहाराश्च ये तेभ्यो भेषज व्यक्तिरिष्यते।।

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There is a saying here : the cowherds, the ascetics, the hunters and the other wanderers of the forests as well as those who live on roots and tubers as their staple food, – it is from them, the recognition and identification of many a drug plant is possible (and is therefore best learnt). Ss. su. 36, 8.9.

b. *seasons and their effects*

6. कालो हि नाम (भगवान्) स्वयम्भुरनादिमध्यनिधनः। अत्र रसव्यापत्संपत्ती जीवितमरणे च मनुष्याणामायत्ते। स सूक्ष्मामपि कलां न लीयत इति कालः, संकलयति कालयति वा भूतानि इति कालः।

Time is what is (the lord, the) self born and has no beginning, middle or end. Herein (i.e., withhin the duration of this time), derangement as well as flourishing of the *rasa* or the assimilable essence of food and living and dying constitute what is finite to man. Time does not dissolve even the smallest of the unit of time, viz., *kala* and that is why it is called *kāala*. Or, it is this that adds up or measures out (from the root *kal* – to count, kalate it kalah; it counts (and hence it is called *kāala*) the beings and that is why it is called the *kāala*

तत्र संवत्सरात्मनो भगवानादित्यो गतिविशेषेण अक्षिनिमेष काष्ठा कला मुहूर्ताहो रात्र पक्ष मासर्त्वयन संवत्सर युग प्रविभागं करोति।

The sun god whose innate nature (itself) is years, brings about categories in this time by specialities of his movement into several classes of units such as winking of the eye, *kaṣta, kāla, muhūrta*, day, night, fortnight, month, *ṛtu, ayana*, year and *yuga*

तत्र लघ्वक्षरोश्चारण मात्रोऽक्षिनिमेषः, पंचदशाक्षिं निमेषाः काष्ठा, विंशद् काष्ठा कला, विंशति कलो मुहूर्तः कलादशभागश्च, त्रिंशन्मुहूर्तमहोरात्रं, पंचदशाहोरात्राणि पक्षः स च द्विविदः – शुक्लः कृष्णश्च, तौ मासः।

The winking of the eye (which is the smallest unit of time) is of the duration of uttering one single short alphabetical sound. 15 winkings (*nimesa*) make one *kaṣṭha:* 30 *kaṣṭhas,* one *kalā;* 20 *kalās,* one *muhūrta;* 30 *muhūrtas* one day and night; 15 days and nights, one *pakṣa* which (in turn) is of two kinds, *śukla* (the white) and *kṛṣṇa* (the dark) – the two together make up one *māsa* or month. Ss. su. 6.3–5.

(How can you define time ? Time is what is endless and self existant. None can question the veracity of this definition. But one can argue that such a type of defining time is not much helpful, or productive as a modern scientist would say. An *operative* definition of Time would therefore be desirable. This is: it is in Time that all that we see (including the decline as well as the flourshing of man, his living and death) happen; there is no escape from Time whatsoever. It is impossible to destroy Time; in fact, it is Time that destroys everything; nothing else times the Time itself. It acts as a measure of everything; therefore Time is called the measure itself. But, suppose, purely for out convenience, we want to measure this Time, how do we proceed ? We proceed by noting that it is the movement of the sun that sets a tone for any such measuring – for, it is this movement that brings about perceptible changes around us – changes, that we can now utilise as frameworks for measuring. What can we select as the unit for a measuring of it? It will be best to utilise for this purpose, a physiological event with which we are all familiar. This is : winking of the eye and the time taken for one such winking. This also corresponds to the time taken for uttering one syllable. The higher ranks of measurement of time are

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henceforth built on this basic unit of winking as follows : 15 winkings = 1 *kastha*; 30 *kaṣṭhas* = 1 *kalā*; 20 *kalās* = 1 *muhūrta*; 30 *muhūras* = 1 day and night together; 15 day-nights = 1 *pakṣa*; 2 *pakṣas* = 1 *māsa*. Let us proceed with the flavour of Suśruta's telling after such a modernistic rendering).

7. तत्र माघादयो द्वादशमासाः, द्विमासिकमृतुं कृत्वा षड्ऋतवो भवन्ति, ते शिशिर वसन्त ग्रीष्म वर्षा शरद्धेमन्ताः, तेषां तपस्तपस्यो शिशिरः, मधुमाधवो वसन्तः, शुचि शुक्रौ ग्रीष्मः, नभोनभस्यौ वर्षाः इषोर्जौ शरत्, सहः सहस्यौ हेमन्त इति।

Therein, commencing from *magha* and the like, the twelve months (viz., the months that have received special names such as *magha*, etc. twelve in all) make up one year (*samvatsara*) and taking two months together, it will be one *ṛtu* and there are six *ṛtus*. These are : *siśira, vasanta, grisma, varṣa, sarad* and *hemanta*. Of these, the months of *tapas* and *tapasya* make up *siśira; madhu* and *madhava vasanta; śuci* and *śukra grisma; nabha* and *nabhasya, varṣa; isa* and *urja, sarat* and *saha* and *sahasya*, hemanta.

त एते शीतोष्णवर्षलक्षणाश्चन्द्रादित्ययोः कालविभागकरत्वादयने द्वे भवतो दक्षिणमुत्तरं च तयोः दक्षिणं वर्षा शरद्धेमन्ताः, तेषु भगवानाप्यायते सोमः, अम्लमधुर लवणाश्च रसो बलवन्तो भवन्ति, उत्तरोत्तरं च सर्वप्राणिनां बलमभिवर्धति। उत्तरं च शिशिर वसन्तग्रीष्माः, तेषु भगवान् आप्यायते अर्कः;
तिक्त कषाय कटुकाश्च रसा बलवन्तो भवन्ति, उत्तरोत्तरं च सर्व प्राणिनां बलमपहीयते।

These have the characteristics of coldness, hotness, and rains respectively and because of the moon and the sun that (ultimately) divide the time, become of two *ayanas, dakṣina* and *uttara*, the southern and the northern. Of these, *varṣa, sarad* and *hemanta* are of the *daksina ayana*. During this time, the *soma* god is gratified, the *rasas* of *amla, lavana* and *madhura* become strong and the strength of all the organisms becomes more and more increased. *Uttarayaṇa* is *śiśira, vasanta* and *grīṣma*. During this time, it is the sun god that gets pleased, the *rasas* of *tikta, kaṣāya* and *kaṭuka* become strong, and the strength of all the organisms becomes more and more decreased.

भवति चात्र -
शीतांशुः क्लेदयत्युर्वीं विवस्वान् शोषयत्यपि। तावुभावपि संश्रित्य वायुः पालयति प्रजाः ।।

There is a saying here : the moon who has cool rays wets this earth, the sun who is effulgent, drys this up while *vāyu* taking resort to both of these, fosters all beings.

अथ खल्वयने द्वे युगपत् संवत्सरो भवति। ते तु पंच युगमिति संज्ञां लभन्ते। स एष निमेषादिपर्यन्तः कालश्चक्रवत् परिवर्तमानः कालचक्रमित्युच्यत इत्येके।

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* It should be noted that nomenclatoraily, Indian horology is very thorough, in the sense that from the level of *muhūrtas* onwards (eg. *brāhmi, abhijin,* etc.) upto the years (*prābhava, vibhava*, etc.) yugas (*treta, dvāpara*, etc.) and *manvantaras* (*tāmasa, vairocisa, vaivasvata*) the individual members receive a specific name.

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Now two *ayanas* put together will form a *samvatsara.* When they (i.e. *samvatsaras*) are five, it (i.e. that segment of time) gets denoted as a *yuga.* Thus, this time, starting from *nimesa* and upto *yuga* goes on revolving about as a wheel of time. Some consider this as the Wheel of Time. Ss. su. 6.6-9.

c. *pharmacological effects varying in tune with the climate*

8. इह तु वर्षा शरद्धेमन्त वसन्त ग्रीष्म प्रावृषः षड़तवो भवन्ति दोषोपचय प्रकोप शमनिमित्तं, ते तु भाद्रपदाद्येव द्विमासिकेन व्याख्याताः तद्यथा-भाद्र पदाश्वयुजौ वर्षाः, कार्तिक मार्ग शीर्षौ शरत्, पौषमाद्यौ हेमन्तः, फाल्गुनचैत्रो वसन्तः, वैशाखज्येष्ठौ ग्रीष्मः, आषाढ श्रावणौ प्रावृडिति।

Here indeed the *varsa, sarad, hemanta, vasanta, grisma,* and *pravrsa* form the six seasons and are the causes of (i) accumulation, (ii) aggravation and (iii) pacification of the *dosas.* They are denoted in couples of months commencing from the *bhadrapada* as follows : *bhadrapadaa* and *aswayuga* are *varsa; kartika* and *margasirsa, sarat; pousa* and *magha, hemanta; phalguna* and *caitra, vasanta; vaisakha* and *jyestha, grisma;* and *asadha* and *sravana, pravrd.*

तत्र वर्षासु ओषधयः तरुणोऽल्पवीर्या आपश्च अप्रशान्ताः क्षितिमल प्रायाः।

Therein, in the season of the rains, the drugs are young, have little virility and the water reservoirs (of the soil) agitated and unsteady and (are mixed) mostly with impurities and the earth (i.e. mud). Ss. su. 6. 10, 11.

d. *pharmacognostic notes from Caraka and others*

9. ओषधीर्नामरूपाभ्यां जानते ह्यजपा वने। अविपाश्चैव गोपाश्च ये च अन्ये वनवासिनः।।

(*naming and recognition* :) The goat-herds, the shepherds, the cowherds and the other dwellers of the forest are acquainted with the names and the forms of the (medicinal) plants.

अथ नामज्ञानमात्रेण रूपज्ञानेन वा पुनः। ओषधीनां परां प्राप्तिं न कश्चिद्वेदितुमर्हति।।

None can claim to know the full (pharmacological) action of the drug (plants) by the acquaintance of their mere name or even, form.

योगवित्त्वपि अरूपज्ञः तासां तत्वविदुच्यते। किं पुनर्यो विजानीयादोषधीः सर्वथा भिषक्।।

If one who knows the uses and actions of (drug plants) though not conversant with their forms (viz., botanical identity) can be called a knower of them in principle (i.e. a pharmacologist), then what can we say of a physician who knows it in all ways (viz. botanically, pharmacologically and in every other respect). ?

योगमासां तु यो विद्यात् देशकालोपपादितम्। पुरुषं पुरुषं वीक्ष्य स ज्ञेयो भिषगुत्तमः।।

He is the best of the physicians who knows how to administer them in accordance with their region (of habitation or procurement) and time (i.e. season) and also after examining each and every patient individually.

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10. यथा विषं यथा शस्त्रं यथाग्निरशनिर्यथा। तथौषधमविज्ञातं विज्ञातममृतं यथा।।

(*the value of correct knowledge*) Like a poison, like a weapon, like a fire and like a thunderbolt is the medicine that is not understood (but utilised - so imminently fatal it is); if understood (however), the same (medicine) is like an ambrosia.

औषधं हि अनभिज्ञातं नाम रूपगुणैस्त्रिभिः। विज्ञातं चापि दुर्युक्तं अनर्थाय उपपद्यते।।

A medicine which is not known in its name, form and qualities or a medicine, known in all these three respects, but adminstered wrongly - both (of these) will serve only for causing a disaster

योगादपि विषं तीक्ष्णं उत्तमं भेषजं भवेत्। भेषजं चापि दुर्युक्तं तीक्ष्णं संपद्यते विषम्।।

Even an acute poison will become an excellent medicine by the right method of preparation; while, even a medicine, if administered wrongly will act as an acute poison.

तस्मान्न भिषजा युक्तं युक्तिबाह्येन भेषजम्। धीमताकिंचिदादेयं जीवितारोग्यकाङ्क्षिणा।।

Therefore, the intelligent person who desires life and health should not take anything prescribed by a physician who is a foreigner to the proper combination (of the medicines). Cs. su. 1. 121-128

11. किंचित् दोष प्रशमनं किंचित् धातु प्रदूषणम्। स्वस्थवृत्तौ मतं किंचित् त्रिविधं द्रव्य मुच्यते।

(*classification*)
(*pharmacological*) Some tranquilise the vitiations, some vitiate the body constituents and some are considered to be condusive to the maintenance of (good) health - the (drug) materials are spoken (thus) to be of these three kinds.

तत् पुनस्त्रिवधं ज्ञेयं जांगमौद्भिद पार्थिवम्।

(*as per the source*) They are also said to be of three kinds, (i) animal (ii) plant and (iii) mineral.

मधूनि गोरसाः पित्तं वसा मज्जाऽसृगामिषम्।
विण्मूत्रचर्मरेतोऽस्थिस्नायुश्रृंग नखाः। जंगमेभ्यः प्रयुज्यन्ते केशा लोमानि रोचनाः।।

Honey, milk, bile, fat, marrow, blood, flesh, excrement, urine, skin, semen, bone, sinews, horns, nails, hooves, hair, down and inspissated bile - these are the substances used (in medicine) from the animals.

सुवर्णं समलाः पंचलोहाः ससिकताः सुधा। मनः शिलाले मणयो लवणं गैरिकांजने।।

Gold, ores, the five metals (copper, brass, tin, lead and iron), sand, lime, red and yellow arsenic, gems, salt, red chalk (ochre) and antimony are spoken to be the (drug) materials from the earth (viz. minerals).

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औद्भिदं तु चतुर्विधम्। वनस्पति र्वीरुधश्च वानस्पत्यस्तथौषधिः।

The plant (drug) material is of four kinds, *vanaspati, virudh, vaanaspati* and *oṣadhi*.

फलैर्वनस्पतिः पुष्पैर्वानस्पत्यः फलैरपि।
ओषध्यः फलपाकान्ताः प्रतानैर्वीरुधः स्मृताः।।

Vanaspatis are so considered because of (their bearing) (only) fruits (viz., *vanaspatis* are so considered as to be bearing fruits wihout passing through a flower stage; therefore, strictly this should include vascular cryptogams; but the trees that bear fruits without what are popularly obvious flowers such as jackfruit are included here), *vāanaspatis* (are so recognised by their bearing) flowers and also fruits. (These two are thus both large sized trees -- the lords of the forest, as their terms literally mean, the former, wiith invisible or no flowers, the latter, a typical angiospermous tree) - *osadhis* end (their life) after they produce fruits (viz., they are annual herbs) *virudhas* are (recognised) by their tendrils and spreading tender branches (climbers and spreaders)

मूलस्त्वक् सार निर्यासनाल स्वरस पल्लवाः। क्षाराः क्षीरं फलं पुष्पं भस्म तैलानि कण्टकाः।।
पत्राणि शुंगाः कन्दाश्च प्ररोहाश्च औद्भिदो गणः।

12. Root, bark, pith, exudation, tubules, juice, sprouts, alkalis, latex, fruit, flower, ash, oils, thorns, leaves, buds, bulbs and off - shoots are the class of the plant (drug) materials.

12. मूलिन्यः षोडशैकोना फलिन्यो विंशति स्मृताः।
महा स्नेहाश्च चत्वारः पंचैव लवणानि च। अष्टौ मूत्राणि संख्यातानि अष्टावेव पयांसि च।।
शोधनार्थाश्च षड्वृक्षाः पुनर्वसु निदर्शिताः। य एतान् वेत्ति संयोक्तुं विकारेषु स वेदवित्।।

(*a general list of medicinal plants from Atreya*)
The root (drugs) are said to be sixteen and the fruit (drugs), nineteen. The great unctuous (drugs) are four and the salts, four. Eight are the urines and eight, the milks. The trees indicated by Punarvasu for purification are six. He who knows how to use all these in diseases is the knower of this science (of Ayurveda). Cs. su. 1.68-76.

13. सर्पिस्तैलं वसा मज्जा स्नेहो दृष्ट श्चतुर्विधः। पानाभ्यंजन बस्त्यर्थं नस्यार्थं चैव योगतः।।

(the unctuous group) The four kinds of the great unctuous (drugs) spoken about, are ghee, oil, fat and marrow. They are, (every one of them) used in combination (with other drugs), as potion and inunctia, (enemata and nasal medication).

स्नेहना जीवना बल्या वर्णोपचयवर्धनाः। स्नेहा ह्येते च विहिता वातपित्तकफापहाः।।

They increase unctuousness, vitality, complexion, strength and plumpiness. They are laid down as curatives of *vāta, pitta* and *kapha* Cs. su. 1. 88, 89.

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14. सौवर्चलं सैन्धवं च विडमौद्भिदमेव च। सामुद्रेण सहैतानि पंच स्युर्लवणानि च।

(the salt group) The *sauvarcala* salt (prepared by boiling down soda with emblic myrobalans), the rock salt (from Sindh), the red granular salt (having a foetid-*viḍ*, smell), the efflorescent salt together with the salt from the sea, these constitute the five salts.

स्निग्धानि उष्णानि तीक्ष्णानि दीपनीयतमानि च। आलेपनार्थं युज्यन्ते स्नेहस्वेद विधौ तथा।।
अधो भागोर्ध्वभागेषु निरुहेष्वनुवासने। अभ्यज्जने भोजनार्थे शिरस्य विरेचने।।
शस्त्र कर्मणि वर्त्यर्थमंजनोत्सादनेषु च। अजीर्णानाहयोर्वाते गुल्मे शूले तथोदरे।।

They are unctuous, hot, acute and foremost among the digestive stimulants. They are used for smearing, in the procedures of oleation and sudation, in removing the impurities of the downward (in purgatives) and upward (in emetics) paths, in dry as well as oily enema, in oily massaging of the body, for eating, in errhines, in surgical procedures (for scarification, etc.); in pads (kept over wounds), collyrium and in filling up and healing a sore; in indigestion, constipitation, *vātic* trouble, splenic enlargement, colicy pain and stomach troubles. Cs. su. 1.90-93.

तदत्यर्थमुपयुज्यमानं ग्लानि शैथिल्य दौर्बल्याभिनिर्वृत्तिकरं शरीरस्य भवति। ये
हि ऐनद्ग्राम नगर निगम जनपदाः सततमुपयुंजते ते भूयिष्ठं ग्लास्नवः शिथिल मांस शोणिता अपरिक्लेश सहाश्च भवन्ति। तद्यथा-बाह्लीक सौराष्ट्रिक सैन्धव सौवीरकाः, ते पयसाऽपि लवणमश्नन्ति।
येऽपीह भूमेरत्यूषरा देशास्तेषु ओषधि वीरुद्वनस्पति वानस्पत्या न जायन्ते अल्पतेजसो वा भवन्ति, लवणोपहतत्वात्। तस्मात् लवणं न अत्युंपयुजीत। ये हि अतिलवण सात्म्याः पुरुषास्तेषामपि खालिप्य पालित्यानि वलयश्च अकाले भवन्ति।

(*effect of over use*) For a person who uses salt in too great a quantity, there will result an exhaustion, looseness and weakness of the body. Those villages, cities, corporations and communities or populations who use this overdose of salt constantly, they become prone to exhaustion, loose in flesh and blood and incapable of tolerating great exertions, such as those from Bahlika, Saurastra, Sindh and Sauvira - who eat salt along with even milk; and in regions that are excessively saline, there will not be born any herbe, spreading plants, trees or lofty trees and even if they are born, they are of little lustre, as they are struck down with salt,. Therefore one should not use salt too much. Even for those persons who have become habituated to use excess of salt, baldness, greyness of hair or appearance of folds in the skin occur in an untimely way. Cs. vi. 1. 18i.

लवणं पुनरौष्ण्यतैक्ष्ण्योपपन्नम् अनतिगुरु अनति स्निग्धम् उपक्लेदि विसृंसन समर्थम् अन्न द्रव्य रुचिकरं आपात भद्रं प्रयोगसम साद्गुण्यात् दोषसंचयानुबन्धं तद्रोचन पाचनोपक्लेदन विस्रंसनार्थं उपयुज्यते।

(*pharmacological action*) Salt is endowed with heat and acuteness (of action), not very heavy, not very viscous, wetteing, (hygrosopic ?), capable of removing the vitiations; (it) brings about a tastiness in food substances; (is) responsible for immediate benefit for a short time and in a small dosage but brings about a collection of mortifications if used over a long time and in a great dosage; and is utilised in bringing about tastiness, digestivity, wetness and de-vitiation. Cs. vi. 1.18.

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15. क्षारः पुनरौष्ण्य तैक्ष्ण्यलाघवोपपन्नः क्लेदयत्यादौ पश्चाद्विशोषयति स पचन दहन भेदनार्थ उपयुज्यतेः सोऽति प्रयुज्यमानः केशाक्षिहृदय पुंस्त्वोप घातकरः संपद्यते। ये हि एनं ग्राम नगर निगम जनपदाः सततं उपयुंजते त आन्ध्यषाण्डय खालित्य पालित्य भाजो हृदयापकर्तिनश्च भवन्ति, तद्यथा प्राच्याश्चीनाश्चः तस्मात् क्षारं नात्यु पयुंजीत।

(*alkali or any corrosive, or acrid substances*) Alkali is endowed with heat, acuteness (of action) and lightness; it wetts in the beginning but desicates later; it is used for disgestiveness, burning and laxativity; if used in an excessive dosage, it becomes responsible for damaging hair, eye, heart and manliness. Those villages, cities, corporations and communities or populations who use it constantly, become prone to blindness; impotence, baldness and greyness and have a pain of cutting up as it were in the cardiac region; as for instance, the Eastern (e.g. Assamese) and the Chinese. Therefore do not use the alkali too much. Cs. vi.- 1.17.

16. तत्र फल जीमूतकेक्ष्वाकु धामार्गव कुटज कृतवेधनानां, श्यामा त्रिवृत् चतुरङ् गुल तिल्वक महावृक्ष सप्तला शंखिनी दन्ती द्रवन्तीनां च, नाना विध देश काल संभवास्वाद रस वीर्य विपाक प्रभावग्रहणाद् देह दोष प्रकृति वयो बलाग्नि भक्ति सात्म्य रोगावस्थादीनां नाना प्रभाववत्वात् च विचित्र गन्धवर्णरस स्पर्शानामुपयोग सुखार्थमसंख्येय संयोगानामपि च सतां द्रव्याणां विकल्पमार्गोपदर्शनार्थं षडबिरेचन योग शतानि व्याख्यास्यामः।

pharmacognostic factors for diverse therapeutic values

Therein, of (the mainly emetic) *madanaphala, jimutaka, iksvaku, dhamargava, kutaja* and *krtavedhana* and (the mainly purgative) *syama, trivrt , catarangula, tilvaka, mahavrksa, saptala, sankhini, danti* and *dravanti* even though the possible combinations are actually innumerable because of (i) the origin of the drugs in different kinds of regions and times, (ii) their pharmacological actions in the body due to varied kinds of taste, assimilable essence, potency, post-assimilatory effect and the special action, (iii) their botanical features of curious and varied kinds of fragrance, colour, sap and touch and (iv) the ease of use - we shall comment here only upon 600 purgative prebarations chiefly as an expedient measure to show the path of the (numerous) alternatives, to the learned. Cs. ka. 1.6.

17. त्रिविधः खलु देशः - जांगलः आनूपः साधारणश्चेति। तत्र जांगलः पर्याकाशभूयिष्ठः, तरुभिरपि च कदर स्वदिर असन अश्वकर्ण घवतिनिश शल्लकी साल सोमवल्क बदरी तिन्दुकाश्वत्थ वटामलकीवन गहनः, अनेकशमी ककुभशिंशपा प्रायः स्थिर शुष्क पवन बल विधूयमान प्रनृत्य तरुण विटपः प्रततमृगतृष्णिकोपगूढतनु खर परुष सिकता शर्करा बहुलः लावतित्तिरि चकोर अनुचरित भूमि भागः वातपित्त बहुलः स्थिर कठिन मनुष्य प्रायो ज्ञेयः।

region-wise classification of plants and humans : Three kinds indeed are the regions : forest, marshy and ordinary. Therein, the forest region abounds in a wide, cloudless and open sky, the trees there are *kadara, khadira, asana, aśvakarna, dhava, tiniśa, śallakī, sāla, somavalkta, badaritindukā, aśwattha, vaṭā āmalakī*-dense forests of them and a preponderance of many trees of *śamī, kakubha* and *śimśapa*; the young trees therein dance about being wafted powerfully by steady, dry winds; mirages are amply spread about there and the region is covered aplenty with small, harsh, rough and gravely sand; birds of *lāva, tittiri* and *cakora* wander about in this land. The area is prone to *vāta* and *pitta* vitiations and the people who inhabit here have a firm and hard body, mostly.

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अथ अनूपो हिन्ताल तमाल नारिकेल कदली वन गहनः, सरित्समुद्र पर्यन्त प्रायः, शिशिर पवन बहुलः, वंजुल वानीरोपशोभिततीराभिः सरिद्भिरुपगत भूमि भागः क्षितिधरनिकुंजोपशोभितः, मन्द पवनानु वीजित क्षिति रुह गहनः, अनेक वन राजी पुष्पित वन गहन भूमि भागः, स्निग्धतरुप्रतानोपगूढः हंस चक्रवाक बलाका नंदीमुख पुण्डरीक कादम्ब मद्गु भृंगराज शतपत्र मत्ताकोकिल्याननुनादित तरुविटपः, सुकुमार पुरुपः पवनकफ प्रायो ज्ञेयः ।

Then, the marshy region is dense with groves of *hintāla, tamāla, narikela* and *kadalī*. It is mostly along the fringes of the rivers and the sea, full of cold breeze; the land is flanking the rivers with their banks beautified with *vanjula* and *vanira* (reeds ?), embellished densely with many varieties of flowers, (and) covered with lush trees and climbers. The young shoots and boughs are resonant with the sounds of *cakravāka, balāka, nandimukha, pundarika, kadamba, maudga, bhṛngarāja, śatapatra,* and the introxicated *kokila*. The people inhabiting here are soft and tender. The region is mostly of *vāta* and *kapha*.

अनयोरेव द्व्योर्देशयोः वीरुद्वनस्पतिवानस्पत्य शकुनिमृगगणयुतः स्थिरसुकुमार बल वर्ण संहननोपपन्न साधारण गुण युक्त पुरुषः साधारणो ज्ञेयः ।

In the ordinary region, there occur the same herbs, trees and lofty trees, birds and beasts as are found in these two kinds of places. The people inhabiting here have a firm, tender body endowed with strength, colour and well knittingness and (are of) ordinary qualities.

तत्र देशे साधारणे जांगले वा यथाकालं शिशिरातपपवन सेविते समे शुचौ प्रदक्षिणोदके श्मशान-चैत्य देव यजनागार सभा श्वभ्रारामवल्मीकोषर विरहिते कुश रोहिपास्तीर्णे स्निग्धकृष्ण मधुर मृत्तिके सुवर्णवर्णमधुर मृत्तिके वा मृदावकालकृष्टे अनुपहतेऽन्यैर्बलक्त्तरैद्रुमैरौषधानि जातानि प्रशस्यन्ते।

Therein, in either the ordinary or the forest region those drugs are considered praiseworthy that are produced in level, clean places served with timely cold and hot (climate) as well as (timely) wind and water, the water course running in a circum-ambulatory direction; free from cremation grounds, funeral mounds, or sacred trees, growing there or as of the village, temples, sacrificial places or assemblies and fissures, parks, anthills or saline soils; meadowed with *kuśa* and *rohiṣa* grass; the soil (being) lush, dark and sweet or golden coloured and sweet and where the soil is not ploughed and there are no stronger trees nearby.

18. तत्र यानि काल जातानि उपागत संपूर्ण प्रमाण रस वीर्यगन्धानि कालातपाग्नि सलिल पवन जन्तुभिः अनुपहत गन्ध वर्ण रस स्पर्श प्रभावाणि प्रत्यग्राणि उदीच्यां दिशि स्थितानि; तेषां शाखापलाशम् अचिर प्ररूढं वर्षा वसन्तयो : गर्हियं ग्रीष्मे मूलानि शिशिरे वा शीर्णप्ररूढवर्णानां, शरदि त्वक् कान्द क्षीराणि, हेमन्ते साराणि यथर्तु पुष्पफलमितिः मंगलाचारः कल्याणवृत्तः शुचिः शुक्लवासाः संपूज्य देवता अश्विनौ गोब्राह्मणांश्च कृतोपवासः प्राङ्मुख उदङ्मुखो वा गृह्णीयात्।

Collection of drug materials.

Therein (viz., among collection-worthy drugs), from those (plants) that are born in their proper time, and have acquired the sap, the potency and the fragrance in their complete proportion and are not damaged by time, heat, fire (or), water in their fragrance, colour, sap, touch and influence and those that are situated in the northern direction - from them, the not so old (viz., the young) branches and the

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foliage are to be taken in the rainy and the spring seasons; roots in summer or winter when the old (leaves) have fallen down and the young colourful (foliage) have just then sprouted; barks, tubers and latex in autumn; pith in the cold season; and the flowers and fruits in their respective seasons. One should collect them after (getting) performed the propitiatory rities by a person who is habitually engaged in doing good; (and one self being) clean, wearing a white garment, after worshiping gods, the aswins, the cow and the brahmins, (and) after fasting and (stationing onself) facing east or north.

गृहीत्वा च अनुरुप गुणवद् भाजनस्थानान्यागारेषु प्रागुदग्द्वरेषु निवात प्रवातैकदेशेषु नित्यपुष्योपहार बलि कर्मवत्सु अग्नि सलिलोपस्वेखेद धूम रजो मूषक चतुष्पदामनभिगमनीयानि स्ववच्छन्नानि शिक्येषु आसाज्य स्थापयेत्।

After collecting them thus, one should keep them in wide halls with vessels proper to the qualities concerned; doors in the east or the north direction; in places that are protected by strong winds but where on one side there is a constant air blowing about; where daily worship with flower, offerings and sacrifices are taking place; where there is no coming in of fire, water, evaporation from the ground, smoke, dust, mice and (other) quadruped animals; (and) (the vessels are to be) well covered and slung on suspensions.

तानि यथादोषं प्रयुंजीत सुरा सौवीरक तुषोदक मैरेय मेदक धान्याम्लदध्यम्लादिभिर्वाते, मृद्वीक आमलक मधुमधुक परूषक फाणित क्षीरादिभिः पित्ते, श्लेष्मणि तु मधु मूत्र कषायादिभिः भावितानि आलोढितानि चः इत्युपदेशः।
तं विस्तरेण द्रव्य देह दोष सात्म्यादीनि प्रविभज्य व्याख्यास्यामः।

One should employ them in accordance with the vitiation concerned, steeped or washed in the wines such as *sura, sauviraka, tuṣodaka* (where grain-chaff is the fermenting material), *maireya, medaka, dhanyāmla, dadhyamla* for *vāta* troubles; or grapes, emblic, honey, *madhuka* and *parūṣaka* in milks and the like for *pitta* troubles; in honey, urine, or decoctives, for *śleṣma* troubles. We shall comment upon this (aspect) in great detail (later) dividing them in accordance with the crude drug materials, somatic constitutions (to which they are suitable respectively), vitiations, compatibilities and so on. Cs. su. 1.6.12.

कालकृताः प्रवात निवातातपच्छायाज्योत्स्नातमः शीतोष्ण वर्षाऽहोरात्र पक्षमासर्तु अयनादयः संवत्सर विशेषाः। त एते स्वभावत एव दोषाणां संचय प्रकोप प्रशम प्रतीकार हेतवः प्रयोजनवन्तश्च।

(Drugs) caused by time (viz aspects of time that act like drugs) are: windy weather, still weather, direct sun, shade, moonlight, darkness, cold, heat, rain, day, night, fortnight, season and *ayana* (a block of six months viz., there are two such blocks in a year, southern - *dakṣināyana* and *uttara* - northern - when the sun is in the southern or the northern half of the capricorn) and special years. All of these by their very nature (and respective speciality act as) causes for the collection, aggravation, paliation and counteraction (of the vitiatives) and (thus) are useful (as drugs). Ss. su. 1. 33, 34.

recognition
19. रूपावबोधो वनगोचरेभ्यः।

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The understanding of the form (of the crude drugs) is (to be obtained) from the wanderers in the forest. Ss. su. 12. 101.

देशभेदेन गुणभेदः हैमवतमौषधं सौम्यं पथ्यं च।

There occurs a difference in the quality (of the drugs) because of the difference in the region (of origin): a Himalayan drug is mild and salutary (but a Vindhya medicine is hot). As. ka. 8.

वर्षावसन्तयोः भेषजानामचिरप्ररुढं शाखा पत्राशं ग्राह्यम्। ग्रीष्मे शिशरे वा मूत्रानि ग्राह्याणि। शरदि त्वक् कन्द क्षीराणि। हेमन्ते साराणि यथर्तु फल पुष्पाणि ग्राह्याणि।

The (crude) drugs, (constituted by) the branches and the leaves, should be collected not so old (viz. when they are rather young) during the rainy season and the spring. The roots are to be collected in summer or winter, barks, tubers and latex in autumn, pith in *hemanta* and the fruits and the flowers in the respectives seasons (in which they appear). As. Ka. 8. 167)

औषधस्य विविध परीक्षा विषायाः - योग्यमपि चौपधमेवं परीक्षेत-इदमेवं रस वीर्यविपाकमेवं गुणमेवं द्रव्यमेवं कर्मैवं प्रभावमस्मिन् देशे जातमस्मिनृतावेवं गृहीतमेवं निहितमेवं निपिद्धमेवं उपसंस्कृतमेवं संयुक्तमनयामात्रयैवं विधस्य काल एतावन्तं दोषमपकर्षत्युपशमयति वा। तथा तेन अनेन वा विशेपेण प्रयुक्तमिदमकरोत्।

The several points to be examined in a drug : even though the medicine (selected) is qualified (for the case concerned), it should be (further) examined as follows : that this is its (respective) nutritive fluid, potency and assimilatory effect; quality; physicial (nature of the) material, action; special effect; that it was born in this particular region and was collected in this particular season; was kept stored in this particular way; that this is prohibited in this way; is prepared in this way and combined in this way; that within this particular measure (of use), in this kind of time (of application) it either removes or quietens this much amount of morbidity. (When scrutinised) In this manner, it becomes utilised in (its true) speciality. Rs. su. 23.8.

कल्पभेदाः - चूर्ण शीतकषाय स्वरस अभिषव आसुतक्रिया फाण्ट कल्क क्वाथ भेदेन औषध कल्पः सप्तधा।

The pharmaceutical form is of seven kinds, by the differences such as powder, cold infusion, fresh juice, distillation, brewing, *phāṇṭa, kalka* and decoction. Ks. khila. 3. 33.35.

सुभूमौ जातं काले च उद्धृतं कालेन उत्पन्नं अविकार्यग्नितोय जन्तु विण्मूत्र जरादिभिरनुपहतं तत्तद्रोग योग्यं क्रमेण च विधिवदुपपादितम्-इति भेषजसम्पत्।

The excellence of the medicine (is constituted by its being) originatting in a good land, collected in the proper time, and produced in proper time, not distorted in function, not affected by fire, water, worms, stools, urine, old age and the like and suitable for the particular disease in question, and secured gradually and according to the prescribed methods. Ks. su. 25.6

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15. Surgery

1. शौर्यं आशुक्रिया शस्त्रतैक्ष्ण्यमसवेद वेपथु। असंमोहश्च वैद्यस्य शस्त्रकर्मणि शस्यते।।

Boldness, quickness and immediacy in action, sharpness of the instrument, non-sweating and non-trembling, and unconfusedness- these are what are praised in a surgeon's act. Ss. su. 5. 10.

शौर्यं निर्भयत्वं, भय भीतो हि साध्यमपि व्रणमवगाढ मूलं नारभते आरब्धं वा अवशेषयति। आशुक्रिया लघुहस्तता शीघ्रं शस्त्रकरणम् आशुक्रियया आतुरस्य चिरंक्लमो न भवति। शस्त्रतैक्ष्ण्यं सुनिशितत्वं सुधारत्वं च तेन रुजा न भवति। असंमोहः असंमूढता, स च आमपक्व व्रण परिज्ञाने तथा प्राप्तानुष्ठाने च, व्रणच्छेदादिषु रक्तादिदर्शनिऽसंमोह इत्यन्ये।

Boldness is fearlessness; if frightened, (a surgeon) will not commence (his work) in case (of) a deep-seated wound even if it is curable or, even if he commences, he will leave some residue. Immediacy in action is deftness of hand or quick surgical opeation; by immediacy of action, patient will not get a fatigue of long duration. Sharpness of the instrument is the good whoned-ness and the good edgedness - because of this, there will not be any pain. Unconfusedness is being non-perplexed; this (refers) to a clear knowledge of unripeness and ripeness of the wound and to carry out the procedure as needed (for the occasion); others consider this to be the nonconfusedness in incising the wound and the like or the sight of blood and the like (at such a time). Da. ss. su. 5. 10.

a. *operation - preliminary details.*

(Suśruta is the only available extensive author on surgery writing mainly as a surgeon. There is abundant information of surgical nature throughout his work. some are quite specialised and detailed as in fractures, some are much renowned as in his operations for the ear and nose which are accepted to have initiated modern plastic surgery and some, curious, though much interesting as in his treatment by caustics of the moles of diverse types, e.g. *nyaccha, vyanga, jatu maṇi*, etc., for cosmetic surgery, and the utilising of the biting ends of the live black ants to suture incisions. We however confine to a few aspects of the basic principles alone. Within this limitation however, the extent of the subject covered is not inconsiderable. Between medicine and surgery, the latter is regarded as more exacting, precise and needing a more reliable practical training and technical skill. It is impressive to note the diversity of the technical information available in our ancient Texts even in such an area, as the quotations below will just hint at in some incisive detail. Unfortunately the reliance is almost wholly from Suśruta; the works of his own other contemporaries, Āurabhra, Gopurarakṣita, etc. which he himself mentions are simply unknown. Gaṇanatha Sen remarks in his introduction to Pratyakṣa *śarīra* that even a mere collction of the stray references on Bhojaprabhanda as found in several other known Ayurvedic works would form a valuable book in this field. None of these materials are utilised here).

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2. त्रिविधं कर्मपूर्वकर्म प्रधानकर्म पश्चात् कर्मेति, तद्व्याधिं प्रत्युपदेक्ष्यामः ।

अस्य तु शास्त्रस्य शस्त्र कर्म प्राधान्यात् शस्त्रकर्मैव तावत् पूर्वमुपदेक्ष्यामः तत्सम्भाराश्च। तत्र शस्त्र कर्माष्ट विधं,

तद्यथा- छेद्यं भेद्यं लेख्यं वेध्यम् एष्यम् आहार्यं विस्राव्यं सीव्यमिति।

अतोऽन्यतमं कर्म चिकीर्षता वैद्येन पूर्वमेव उपकल्पयितव्यानि भवन्ति;

तद्यथा-यन्त्र शस्त्र क्षाराग्नि शलाकाश्रृंग जलौकालाबूजाम्बवौष्ठ पिचु प्रोत सूत्र पत्र पट्ट मधुघृत वसा पयस्तैल तर्पण कषायालेपन कल्क व्यजन शीतोष्णोदक कटाहादीनि परिकर्मिणश्च स्निग्धाः स्थिरा बलवन्तः ।

Surgical treatment involves three steps; preoperative procedures, operation proper and post-opeative care. Details (of everyone of them) will be told in connection with specific diseases later. Since in this treatise of ours, surgery is the principal aspect, we shall teach about this first, and, the paraphernalia thereof. The operations are of eight kinds; (i) excision *(chedyam),* (ii) incision (*bhedyam*), (iii) scarification (*lekhyam*), (iv) puncturing (*vedhyam*), (v) probing (*esyam*), (vi) extraction (*āhāryam*) (vii) draining (*visravyam*) and (viii) suturing (*sivyam*). The materials (i.e. equipments) that the surgeon desiring to commence anyone of these should keep ready at the very outset itself, are as follows: the requisite machines (*for e.g., to fix the patient firmly or collect the drainage material as by alābu and srnga yantras, the gourds and the horns*), the (cutting) instruments, the caustics, the fire,, the probe, the horn, the leech, the *jambavausta (a cauterising stylus with the end, of the shape of the jamun fruit*), (dressing) cotton, the woven cloth (*prota where lengthwise threads are more than the cross ones - as in modern bandage materials*), suturing threads, leaves, strips of cloth, honey, ghee, lard, milk, oil, refreshing decoction (*prepared by boiling a mixture of one part of the drug and four or eight parts of water till only a quarter of the total quantity remains*), ointment, *kalka (a tenacious paste)*, fan and large vessels of cold and hot water as well as attendants who are friendly, steady, and strong.

ततः प्रशस्तेषु तिथि करण मुहूर्तनक्षत्रेषु दध्यक्षतान्नपानरत्नैरग्निविप्रान् भिषजश्च अर्चयित्वा कृतबलिमंगल स्वस्ति वाचनं लघु भुक्त वन्तं प्राङ् मुखमातुरमुपवेश्य यन्त्रयित्वा प्रत्यङ् मुखो वैद्यो मर्म सिरा स्नायु सन्ध्यस्थिधमनीः परिहरन् अनुलोमं शस्त्रं निदध्यादापूय दर्शनात् सकृदेव अपहरेत् शस्त्रमाशु चः महत्स्वपि च पाकेषु द्व्यङ्गुलान्तरं त्र्यङ् गुलान्तरं वा शस्त्रपदमुक्तम्।

तत्रायतो विशालः समः सुविभक्तो निराश्रय इति व्रण गुणाः ।

आयतविशालश्च सुविभक्तो निराश्रयः । प्राप्तकालकृतश्चापि व्रणः कर्मणि शस्यते।।

शौर्यमाशुक्रिया शस्त्रतैक्ष्ण्यमस्वेद वेपथु असंमोहश्च वैद्यस्य शस्त्रकर्मणि शस्यते।।

एकेन वा व्रणेनाशुष्यमाने नाऽन्तरा बुद्ध्याऽवेक्ष्य अपरान् व्रणान् कुर्यात्।।

यतो यतो गतिं विद्यादुत्संगो यत्र यत्र च।

तत्र तत्र व्रणं कुर्याद्यथा दोषो न तिष्ठति।।

After these are ready and (you have selected) an auspicious time and also carried out proper worship and the offerings, seat the patient who has taken only light food (seat him) facing eastwards. Fix him firmly by means of the necessary machines. The physician should face west. Use the knife till the pus is completely seen (i.e., exposed); (keep and ply it always) in the direction of the hairs (on the body) but taking care to avoid the *marmas* (vital spots), the veins, the tendons, the

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joints, the bones and the arteries. Remove the knife immediately after (your operation is over; do not tarry at all). If the inflammation is great, you can stretch the incision line upto two or even three inches. The characteristics of a good surgical incision are that it is well elongated, wide, even, sharply differentiated and does not itself harbour any pus receptacle. Long. wide, sharp, (pus) receptacle-free and timely incision is considered the best. Bravery, quickness of action, sharpness of the instrument and an absence of sweating., trembling or confusion (on the surgeon' part) are praised as the best (of the features) among the operative procedures of a surgeon. If (the pus) is not cleaned fully by one single incision, but is (seen to be) still retained (in the tissues instead), the physician should carefully assess the situation and (then) create another incision (if warranted and) not far away from the previous one. Wherever (in fact) the course of the *utsanga* (the deepest part of the ulcer) leads you, make the incisions all along and at everyone of these places (and) in such a manner that the pus will not remain there (any further).

तत्र भ्रूगण्ड शंख ललाटाक्षिपुटौष्ठदन्तवेष्टक कक्षाकुक्षिवङ्क्षणेषु तिर्यक् छेद उक्तः।
चन्द्रमण्डलवच्छेदान् पाणिपादेशु कारयेत्। अर्धचन्द्राकृतीं श्चापि गुदे मेढ्रे च बुद्धिमान्।।
अन्यथा तु सिरास्नायुच्छेदनम् अतिमात्रं वेदना चिराद् व्रण संरोहो मांसकन्दी प्रादुर्भाव श्चेति।

Incisions should be oblique at the eyebrows, cheeks, temples, forehead, eyelid, lips, gums of the teeth, axil, belly and the groin. They should be circular like the moon at the palm and the sole but crescentic at the anus and the penis. If these specifications are violated, veins or tendons would be cut, excessive pain would arise, the healing would be very prolonged and even a fleshy protuberance may arise (at the region of your suturing, later).

मूढ गर्भोदरार्शोऽश्मरी भगन्दर मुख रोगेषु अभुक्तवतः कुर्वीत।

In cases of dead foetus stomach troubles, piles, urinary calculus, fistula and facial diseases, the patient should be operated without giving meals (i.e., on empty stomach).

ततः शस्त्रमवचार्य शीताभिरभ्दिरातुरमाश्वास्य समन्तात् परिपीड्य अंगुल्या व्रणमभिमृज्य प्रक्षाल्य कषायेण प्रोतेन उदकमादाय तिलकल्कमधु सर्पिः प्रगाढामौषध युक्तां न अति स्निग्धां न अति रूक्षां वर्तिं प्रणिदध्यात्; ततः कल्केन आच्छाद्य घनां कवलिकां दत्वा वस्त्रपट्टेन बध्नीयात्; वेदनारक्षोघ्नैर्धूपैर्धूमयेत्, रक्षोघ्नैश्च मन्त्रैः रक्षां कुर्वीत।

After the operation, remove the knife, console the patient with cool water, press the wound all around with the fingers, cleanse the wound, and flood it with (a corrective) decoction. Then wipe with a piece of woven cloth - the *plota (does this differ from prota referred earlier in that the major threads are crosswise?)* and remove all the water and make it dry. Apply a pad containing the medicine and enriched well with the sesame *kalka*, honey and ghee - neither too sticky nor too dry. Cover this pad with a *kalka*, give a large bolus of cotton on it and tie with a bandage. Fumigate with the fumes of substances that take away the pain and also afford protection. Guard the patient with the *rakṣoghna mantra (protective incantations)* as well.

ततो गुग्गुलु अगुरु सर्जरस वचा गौरसर्षप चूर्णैर्लवणनिम्बपत्रविमिश्रैः आज्ययुक्तैः धूपयेत्, आज्यशेषेण च अस्य प्राणान् समालभेत।

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Fumigate with a drug made up of the powders of *guggulu, aguru, sarja rasa, vaca,* white sesame, mixed with salt and neem leaf and ghee as the base (*This mixture was evidently well famed for the two purposes of fumigation noted above, i.e., analgesia and protection*) Gently massage the chest and the other *marmas* with the residuum of this ghee: this (step) will restore the patient to his habitual vitality. ss. su. 5. 3-18.

ततः कृतरक्षभातुरमागारं प्रवेश्य आचरिकाम् आदिशेत्।
ततस्तृतीयेऽहनि विमुच्यैवमेव बध्नीयात् वस्त्र पट्टेनः न चैनं त्वरमाणोऽपरेद्युर्मोक्षयेत्।
द्वितीयदिवस परिमोक्षणात् विग्रथितो व्रणश्चिरादुपसंहरोति तीव्र रुजश्च भवति।
तत ऊर्ध्वं दोष काल बलादीनवेक्ष्य कषाय लेपन बन्ध आहार आचारान् विदध्यात्।
न चैनं त्वरमाणः सान्तर्दोषं रोपयेत्ः स हि अल्पेनापि अपचारेण अभ्यन्तरम् उत्संगं कृत्वा भूयोऽपि विकरोति।
तस्मादन्तर्बहिश्चैव सुशुद्धं रोपयेद्व्रणम्।

Take him (then) into his room and instruct the nurses* in details (for the post-operative care). Remove the bandage on the third day and retie similarly by a fresh cloth. Do not remove (this bandage) in hurry on the next day itself, (for, then) tubercles or knobs of flesh may appear, healing will be very prolonged and there will be acute pain as well. From then on, prescribe the (specific varieties of) decoctions, ointments and bandaging, diets and behavious observing the dosa, the time and the strength of the patient. (Take care also that you) do not heal up the wound in a hurry, keeping the vitiation inside, still. For it will then get excessively deformed later on by forming a deeper *utsanga*. Therefore, heal the wound (at the first operation itself in such a manner that it is) clean inside as well as outside.

स्ढोऽपि अजीर्ण व्यायाम व्यवायादीन् विवर्जयेत्। हर्षं क्रोधं भयं चापि यावत् स्थैर्योपसंभवात्।।
हेमन्ते शिशिरे चैव वसन्ते चापि मोक्षयेत्। त्र्यहाद्द्व्यहाद् शरद् ग्रीष्म वर्षास्वपि च बुद्धिमान्।।
अतिपातिषु रोगेषु नेच्छेद् विधिमिमं भिषक्। प्रदीप्तागारवत् शीघ्रं तत्र कुर्यात् प्रतिक्रियाम्।
न वेदना शस्त्र निपात जाता
तीव्रा शरीरं प्रदुनोति जन्तोः।
घृतेन सा शान्तिमुपैति सिक्ता
कोष्णेन यष्टीमधुकान्वितेन।।

Even if healed in this way, the patient should (also) avoid indigestion, exercise, cohabitation, (excessive) mirth, anger and fear, till steady health returns in that region. In the season of *hemanta (winter, mid-November to mid-January), śiśira (cool or dewy season, mid-January to mid- March)* and *vasanta (spring, mid-march to mid-May),* remove the first bandage on the third day but if it is *śarad* (autumn, mid- August to mid- November) and *grīṣma* (summer, mid-May to mid-July) do so on the second day itself. If however there is inflammation or haemorrhage in the wound, do not desire (i.e., stick to) this procedure. Adapt whatever is needed (and) immediately, (just) as you would, if you wish to save a house set on fire. The pain caused by the cutting knife, if acute and continues to trouble the patient, will become quietened if smeared with the powder of *yaṣṭimadhuka* mixed with warm ghee. Ss. su. 5. 3-18.

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* A likely evidence for the existence of an analogue for modern hospitals with the requisite staff. Caraka gives much further details of this aspect.

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b. *operative machines*

3. यन्त्र शातमेकोत्तरम्; अत्र हस्तमेव प्रधानतमं यन्त्राणामवगच्छ। किं कारणं। यस्माद्धस्तादृते यन्त्राणामप्रवृत्तिरेव, तदधीनत्वात् यन्त्र कर्मणाम्।

There are hundred and one machines utilisable during surgery. Of all these, the surgeon's hand is the best. Why? For, if this hand is not there, no machine can be employed at all and all mechanical activities (of any imaginable machine) are wholly under the subordination of the hand. Ss. su. 7. 3.

4. तत्र मनः शरीराबाध कराणि शल्यानिः तेषामाहरणोपायो यन्त्राणि।

Whatever that causes distress to mind and body is called a *salya. Yantras* (machines) are the devices to extract them. Ss. su. 7, 4.

अति प्रवृद्धं मल दोषजं वा शरीरिणां स्थावर जंगमानाम्। यत् किंचिदाबाधकरम् शरीरे तत् सर्वमेव प्रवदन्ति शल्यम्।।

Whatever it is that presses hard (MW) and pains in the body even if it is due to excessively grown (corporealisation) due to (the collected) impurity (*mala*) or the vitiation (i.e. due to physiological and not merely accidental reason of (all) embodied beings, plants and animals) – the whole of its is spoken of as the surgically removable (structures). (viz. any pain causing concentrations). Ds. Ss. su. 1.5.

(*Śalya* is thus any specific matter that causes an unusually severe and always circumscribed pain or distress. *Śalyacikitsa* or surgery is to eradicate this *śalya* or to mitigate its effect. This result can however be achieved by measures of medication, machinery or surgical instruments. The concern here is with the latter two).

5. तेषामाहरणोपायो यन्त्राणि। तानि षट्प्रकाराणिः तद्यथा-स्वस्तिक यन्त्राणि संदंश यन्त्राणि ताल यन्त्राणि नाडी यन्त्राणि शलाका यन्त्राणि उपयन्त्राणि चेति। तत्र चतुर्विंशतिः स्वस्तिकयन्त्राणि द्वे संदंश यन्त्रे द्वे एव ताल यन्त्रे विंशतिर्नाड्यः अष्टाविंशतिः शलाकाः पंचविंशतिरुपयन्त्राणि। तानि प्रायशो लौहानि भवन्ति तत्प्रतिरूपकाणि तदलाभे। तत्र नाना प्रकाराणां व्यालानां मृगपक्षिणां मुखैर्मुखानि यन्त्राणां प्रायशः सदृशानिः तस्मात् तत्तत्सा रूप्यादागमादुपदेशादन्य यन्त्र दर्शनात् युक्तितश्च कारयेत्।

समाहितानि यन्त्राणि खर श्लक्ष्ण मुखानि च। सुदृढानि सुरूपाणि सुग्रहाणि च कारयेत्।।

Yantras (those which help in controlling; root is yam to control) are the devices that help in extracting out (these *śalyas*). They are of six kinds : *swastika (having a swastika or a cross on their body, e.g., tongs and scissors), sandaṁśa (whose two operative ends bite against each other, e.g., forceps), tāla (whose operative ends are flat and usually circular like a tāla vādya e.g., scoops),* nāḍi *(whose body is hollow, elongated and tubular like a nāḍi e.g., a tube), śalāka (whose body is solid but elongated like a probing rod, e.g. styli and probes)* and *upayantras (the adjunct machines or the minor instruments).* Of these, 24 are

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swastika type, 2 *sandamsa,* 3, *talas,* 20 *nadis,* 28 *śalākas* and 25 are the adjuncts. These are all probably of metals, specially steel. If metals are not available, any other substance suitable for the purpose may be utilised. The faces of the instruments (i.e. *the operative ends*) mostly simulate the faces of various kinds of predatory or other animals and birds. Therefore the physician should get his own surgical instruments made similar to these animals or as the other traditional texts direct or as taught (to him) or (as he himself decides) by looking at other machines and (using his own) skill. These should have a proper proportion, with their edge rough or supple (as required), quite strong, and easy as well as comfortable and convenient to handle. Ss. su. 7. 5-9.

6. रज्जु वेणिकापट्टचर्मान्तर्वल्कल लता वस्त्र अष्ठीला अश्म मृदर पाणि पादतल अंगुलि जिह्वा दन्त नख मुख बालाश्वकटक शाखाष्ठीवन प्रवाहण हर्ष अयस्कान्तमयानि क्षाराग्नि भेपजानि चेति।

The minor instruments are: ropes, bamboo, strops, bandage material, leather, inner bark, creepers, cloth, nut like stone (*asthila*), pestle; the surgeon's own palm, sole, finger, tongue, teeth, nails and mouth; the briddle-bit-ring of a young horse (*bālāśva kataka*); branches, spittle; carriage (*to remove the patient elsewhere?*) delightful toys (*harsa, to divert the attention of the child patients?*), magnet, alkalies - caustics, fire and drugs.

एतानि देहे सर्वस्मिन् देहस्य अवयवे तथा। सन्धौ कोष्ठे धमन्यां च यथा योग्यं प्रयोजयेत्।।

Make use of these (several instruments narrated above) in the body and every limb of it, in the joints, any of the viscera or the artery as the need is indicated. Ss. su. 7, 15. 16.

7. यन्त्र कर्माणि तु- निर्घातन पूरण बन्धन व्यूहन वर्तन चालन विवर्तन विवरण पीडन मार्ग विशोधन विकर्षण आहरण आंछन उन्नमन विनमन भंजन उन्मथन आचूषण एषण दारण ऋजूकरण प्रक्षालन प्रधमन प्रमार्जनानि चतुर्विंशतिः।

The actions carried out by these (several) instruments are: hammering (*nirghātana*), filling (*pūraṇa*), tieing (*bandhana*), bundling (up in order to remove out - *vyūhana*), turning (*vartana*), manipulation or moving about (*cālana*), turning around (*vivartana*), separation (and display - *vivarana*), pressing (*pīḍana*), cleaning the passage (*marga visodhana*), detraction (*vikarsana*), extraction (*āharaṇa*), dilatation or expanding the contracted organ (*anchana*), elevating (*unnamana*), depressing (*vinamana*), breaking or crushing (*bhanjana*), shaking up (*unmathana*), suction (*acuṣaṇa*), probing (*eṣaṇa*), splitting (*dāraṇa*), setting right or rectification of a bone for instance (*ṛjūkaraṇa*), flooding (*praksālana*), insufflation (*pradhamana*) and wiping (*pramārjana*). They are (thus) altogether twenty-four. Ss. su. 8. 17.

8. स्वबुद्ध्या चापि विभजेद्यन्त्र कर्माणि बुद्धिमान्। असंख्येय विकल्पत्वात् शल्यानामिति निश्चयः।।
तत्र अतिस्थूलम् असारम् अतिदीर्घम् अति ह्रस्वं अग्राहि विपमग्राहि वक्रं शिथिलम् अत्युन्नतम् मृदुकीलं मृदु मुखं

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मृदुपाशम् इति द्वादश यन्त्र दोषाः ।

एतैर्दोषैर्विनिर्मुक्तं यन्त्रमष्टादशांगुलम् । प्रशस्तं भिषजा ज्ञेयं तद्धि कर्मसु योजयेत् ।।
दृश्यं सिंहमुखाद्यैस्तु गूढं कङ्कमुखादिभिः । निर्हरेत शनैः शल्यं शास्त्र युक्ति व्यपेक्षया ।।
निवर्तते साध्यवगाहते च शल्यं निगृह्योद्धरते च यस्मात् ।
यन्त्रेष्वतः कङ्कु मुखं प्रधानं स्थानेषु सर्वेषु अधिकारी चैव ।।

(But) since the possible alternatives of the *śalyas* are innumerable, the skilled physician should (actually) differentiate the instrumental action concerned (for the particular *śalya* of the case in question) on his own intelligence (and take steps accordingly). The possible *blemishes* of the instruments are: being too stout; being made up of a defective (i.e., worthless, *asaram*) metal; being too long, too short, non-handleable, handleable with difficulty, crooked, loose, too high (*in the dip of the upper jaw of the swastika type, for instance*) having a soft hinge, or a soft pliant face, a soft tie or handle (*mṛdupāśam*) - twelve in all. An instrument (which is) devoid of any of these blemishes and is of eighteen inches length is the best. The *salya* that is visible outside is to be taken out by the animal faced instruments (*which thus have a firm grip on a broad surface*) while the hidden salyas are to be taken out by means of the bird faced ones (which probe deep and work in a sharp and circumscribed spot). The *salya* should be taken out with these instruments slowly and gradually and as instructed by the technical work (concerned) as well as one's own experience and skill. Of all the instruments (mentioned), the heron tongs is the pre-eminent, since it can be turned back easily and also sent in with ease, and can extract the *śalya* with full control throughout and it is (further) prescribable in all possible places. Ss. su. 7. 18-22.

c. *surgical (i.e. cutting) instruments: the sastras.*

9. विंशतिः शस्त्राणिः तद्यथा-मण्डलाग्र करपत्र वृद्धिपत्र नखशस्त्र मुद्रिकोत्पलपत्रक अर्धधार सूचि कुशपत्र आटीमुख शरारिमुख अन्तर्मुख त्रिकूर्चक कुठारिका व्रीहि मुख आरा वेतस पत्रक बडिश दन्तशङ्कु एषण्य इति।

These are 20: such as: circular or round headed knife, handsaw, scalpel or dissecting knife (*vṛddhipattra, cutting edge just elongated from a stout handle that does form a neck in between viz., the handle and the cutting portion*) nail parer (*nakha śastra, fixed to the finger and acting like an extended nail*), finger knife, lotus leaf (utpala patra, *blade like that of a lotus petal, double* edged), single edged knife (*ardha dhāra*, probably similar to the former but edged only on one side), needle, *kuśa* leaf (*kuśa patra, blade like that of the leaf of kusa grass, elongated, narrow and sharp throughout* - bistoury), *āṭī mukha* (*āti is a bird Turdus ginginianus, with its crossed beaks; this instrument was employed in blood letting*) scissors (*śarāri mukha - heron's beak*), incurved (*antarmukha* - a bistoury), *trikūrcaka* (*an instrument with three brush-like points*), axe shaped knife, paddy faced (*vrīhi mukha, cutting end like the shape of a paddy grain or its husk?*) awl (*ārā* - spoke like), narrow bladed scalpel (*vetasa patra, the cutting edge as think as and of the shape of a vetasa patra - a bamboo leaf*), hook, tooth cone or scater and sharp probe.

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10. तत्र मण्डलाग्र करपत्रे स्यातां छेदने लेखने च, वृद्धिपत्र नखशस्त्र मुद्रिकोत्पल पत्रकार्धधाराणि छेदने भेदने च, सूचीकुशपत्राटीमुख शरारिमुखान्तर्मुख त्रिकूर्चकानि विस्रावणे, कुठारिका व्रीहिमुखारावेतसपत्रकाणि व्यधने सूची च, बडिशं दन्त शंकुश्च आहरणे, एषण्येषणे अनुलोम्ये च, सूच्यः सीवने इत्यष्ट विधे कर्मण्युपयोगः शस्त्राणां व्याख्यातः।

Of these, the circular or the round headed knife is for cutting and scarification. The scalpel or the dissecting knife, the nail parer, the finger knife (*mudrika - fixed rather down in the finger as a ring, unlike the nakha patra which is to be fixed at the very tip of the finger; blade, with one or two cutting edges*), the lotus leaf (*somewhat similar to a lancet*) and the single edged knife are for cutting and rupturing. The needle, the bistoury, the *atimukha*, the scissors, the incurved bistuory and the *tricūrcaka* are for draining. The axe shaped knife, the paddy face, the awl and the narrow bladded scalpel are for boring, penetration and pricking (*vyadhana*) and also, the needle. The hook and the tooth scater are for extraction. The sharp probe is for probing and the needle is for stitching and suturing. We have thus enumerated the eight kinds of application of the surgical (cutting) instruments. Ss. su. 8. 3,4.

11. तेषामथ यथायोगं ग्रहणसमासोपायः कर्मसु वक्ष्यते-तत्र वृद्धिपत्रं वृन्त फल साधारणे भागे गृह्णीयात्, भेदनान्येवं सर्वाणि, वृद्धिपत्रं मण्डलाग्रं च किंचिदुत्तानेन पाणिना लेखने बहुशोऽवचार्यं, वृन्ताग्रे विस्रावणानि, विशेषेण तु बाल वृद्ध सुकुमार भीरु नारीणां राज्ञां राज पुत्राणां च त्रिकूर्चकिन विस्रावयेत, तल प्रच्छादित वृन्तमंगुष्ठप्रदेशिनीभ्यां व्रीहि मुखं, कुठारिकां वाम हस्तन्यस्तां इतर हस्तमध्यमाङ्गुल्या अंगुष्ठ विष्ठब्धयाऽभिहन्यात्, आराकर पत्रैषण्यौ मूले, शेषाणि यथायोग्यं गृहीयात्।

(i) *Handling.* We shall now tell in brief how to handle them during the operation. The scalpal is to be held at the meeting place between the handle and the operative end. This should be so, for the purposes of all *breaking* (cleaving, splitting, rending, dividing and separating). The scalpel and the circular knife should be held with a slightly raised hand (as it will have) to be used many a time (i.e. repeatedly, during scarification (for instance). The instrumens meant for draining are to be held at the base of the handle. Specially for children, the tender, the timid and the ladies as well as the king and the prince, carry out the operation of draining (with the help of) a *tricurcaka* . The paddy faced is to be held in such a way that its handle is covered fully by means of the surgeon's palm, while the operative end itself lies between his thumb and the forefinger. Hold the axe headed knife with the left hand and beat it with the prop of the middle finger and the thumb. The awl, the hand saw and the sharp probe are to be held at the base itself (while all) the others are to be held as the occasion demands.

तेषां नामभिरेव आकृतयः प्रायेण व्याख्याताः।

The very names (of these instruments) probably indicate their shapes. Ss. su. 8. 5,6.

(ii) *dimensions and specifications.*

12. तत्र नख शस्त्रैषण्यावष्टांगुले, सूच्यो वक्ष्यन्ते, प्रदेशिन्यग्रपर्वप्रदेश प्रमाणा मुद्रिका, दशांगुला शारारिमुखी सा च कर्तरीति कथ्यते। शेषाणि तु षडङ्गुलानि।

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The nail parer and the sharp probe are to be of 8 inches. We shall tell about the length of the needles later. The finger knife is to be of a dimension suitable to that of the tip region of the last joint of the fore-finger (of the surgeon). The *śarāri mukha* is to be of 10 inches; this is also called *kartari* or the scissors. The rest are to be of 6 inches.

तानि सुग्रहाणि सुलोहानि सुधांपाणि सूस्णाणि सुसमाहित मुखाग्राणि अकरालानेति शस्त्रसंपत्।
तत्र वक्रं कुण्ठं खण्डं खर धारम् अतिस्थूलम् अत्यल्पम् अतिदीर्घम् इत्यष्टौ शस्त्र दोषाः।
अतो विपरीतगुणमाददीत, अन्यत्र करपत्रात्;
तद्धि खरधारमस्थिच्छेदनार्थम्।

The *excellence* of all of these instruments lies in their (i) easy manipulability, (ii) being made of a good metal, and (iii) having a good edge, (iv) good form, (v) well formed face and edges and (vi) not being fierce looking. The *blemishes* are eight: (i) being crooked or (ii) short; (iii) liability to break; (iv) being rough edged, (v) too stout, (vi) too small, (vii) too long or (viii) too short. Select the instruments that have features contrary to these blemishes excepting for the saw which is best suited for cutting the bone only if rough edged.

तत्र धारा भेदनानां मासूरी लेखनानामर्धमासूरी व्यधनानां विस्रावणानां च कैशिकी छेदनानां अर्धकैशिकीति।
बडिशं दन्त शङ्कुश्च आनताग्रे। तीक्ष्ण कण्टक प्रथम यवपत्र मुख्येषणी गण्डूपदाकार मुखी च।
तेषां पायना त्रिविधा क्षारोदक तैलेषु।
तत्र क्षारपायितं शर शल्यास्थिच्छेदनेषु,
उदकपायितं मांसच्छेदन भेदन पाटनेषु,
तैल पायितं सिरा व्यधन स्नायुच्छेदनेषु।
तेषां निशानार्थं श्लक्ष्णशिला माषवर्णा,
धारा संस्थापनार्थं शाल्यकी फलकमिति।

The edge of the weapons for *breaking* should be of the size of a whole *masūra* (the lentil) seed. For *scarifying* it should be of the size of half of the lentil seed. For operations of *boring and draining*, the edge is to be of the dimemsions of a hair. The hook and the tooth cone should have their tips bent. The probes are of three types; like a sharp thorn, the first barley leaf or like the head of an earth-worm (*viz. elongated and very pointed, medium pointed and blunt headed, respectively*). The tempering of these instruments is of three types: in caustics, water, or oil. Caustic or alkaly tempered (instrumens are to be used) for cutting the *śalya* or the arrows and the bones. The water tempered (instruments are to be used) for cutting, rupturing and splitting of the flesh while the oil tempered is (meant) for boring the veins and cutting the tendons and ligaments. For whetting them, use a *slakṣṇa* śila, a polishing stone which is dark-blue like masa (the bengal gram).

To strop them, use the planks of the silk cotton tree.

यदा सुनिशितं शस्त्रं रोमच्छेदि सुसंस्थितम्। सुगृहीतं प्रमाणेन तदा कर्मसु योजयेत्।।

When the weapon is well sharpened (in this way by plying it on the polishing stone) and you are sure that it can cut the hair and is (also) well set, hold it firmly and as prescribed and then use it for the operation. Ss. su. 7-14.

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(iii) *minor instruments and a general advice*

13. अनुशस्त्राणि तु त्वक्सार स्फटिक काच कुरुविन्द जलौकोग्नि क्षार नख गोजी शेफालिकाशाक पत्रकरीर बालाङ्गुल्य इति।

शिशूनां शस्त्र भीरूणां शस्त्राभावे च योजयेत्। त्वक् सारादि चतुर्वर्गं छेद्ये भेद्ये च बुद्धिमान्।
आहार्यच्छेद्यभेद्येषु नखं शक्येषु योजयेत्। विधिः प्रवक्ष्यते पश्चात् क्षीरवह्निजलौकसाम्।
ये स्युर्मुखगता रोगा नेत्र वर्त्मगताश्च ये। गोजी शेफालिका शाकपत्रैर्विस्रावयेत्तु तान्।
एष्येषण्यलाभे तु बालाङ्गुल्यङ्कुरा हिताः।

The minor weapons are: *tabsir* (the hardened bamboo manna), alum crystal, glass, black salt, the leech, the fire, the caustics, the nail (of the surgeon himself), the sharp leaf of the *goji* plant, the rough leaf of *sephalika*, and the scabrid, large leaf of the teak, the bamboo spines and the surgeon's own tender fingers. Use the quatrad of the minor instruments (the first four), in cutting and breaking and in the case of children or where the patient is afraid of the weapons, or when the required instruments are not available. To pick, cut and split, use (your) nail (itself) wherever possible. We shall tell (later), about the method of using the caustics, the fire and the leech. In the diseases of the face and the eyes, drain them with the leaves of *goji, sephālikā* and *śāka*. For probing if probes are not available, use (your own) tender fingers or the seed sprouts.

शस्त्राण्येतानि मतिमान् शुद्ध शैक्या (त्या) यसानि तु। कारयेत् करणप्राप्तं कर्मारं कर्म कोविदम्।।

Get these cutting instruments made of pure (and chilled?) steel (*śaityāyasa*) and with the help of an expert iron smitth.

प्रयोगज्ञस्य वैद्यस्य सिद्धिर्भवति नित्यशः। तस्मात् परिचयं कुर्यात् शस्त्राणां ग्रहणे सदा।।

(Despite all that we have said regarding specifications), success always follows a physician who is well acquainted with practising the use of the instruments (narrated and not merely knows them by theory). Therefore, always cultivate such an acquintance of (an actual) handling of them. Ss. su. 8. 15-20.

d. *practical coaching*

14. अधिगत सर्व शास्त्रार्थमपि शिष्यं योग्यां कारयेत्। स्नेहादिषु छेद्यादिषु च कर्मपथमुपदिशेत्। सुबहु श्रुतोऽपि अकृत योग्यः कर्मसु अयोग्यो भवति।

Even if the student understands all the meanings of the science, ensure that he actually gets the practice (of what the methods of medication are): such as application of the ointments and so on, and, surgery, such as the cutting and so on. Even if very well learned and educated, if one does not actually practice (the procedures of medication and instrumental operation), one would become unfit for any specific work.

15. तत्र पुष्प फलालाबू कालिन्दक त्रपुसैर्वारुक कर्कारुक प्रभृतिषु छेद्यविशेषान् दर्शयेत्, उत्कर्तनापकर्तनानि च उपदिशेत्; दृति बस्ति प्रसेवक प्रभृतिषु उदक पङ्क पूर्णेषु भेद्ययोग्यांः सरोम्णि चर्मण्यातते लेख्यस्यः मृतपशुसिरासु उत्पलनालेषु च वेध्यस्यः घुणोपहतकाष्ठ वेणु नल नाली शुष्कालाबू मुखेषु एष्यस्यः सूक्ष्मघन वस्त्रान्तयो

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मृदुचर्मान्तयोश्च सीव्यस्यः पुस्तमय पुरुषांग प्रत्यंगविशेषेषु बन्धन योग्यां; मृदुपुमांस खण्डेष्वग्नि क्षार योग्यां; मृदुचर्यमांसपेशीषु उत्पलनालेषु च कर्ण सन्धिबन्धयोग्याम्; उदकपूर्ण घटपार्श्व स्रोतस्यलाबूमुखादिषु च नेत्रप्रणिधान बस्ति व्रण बस्ति पीडनयोग्यामिति।

Show him (i.e., the student, therefore) the specialities of cutting (on the large fleshy fruits like those of) *puṣpa phala, alābu, kālindaka, trapusa, irvāruka* and *karkāruka (all members of Cururbitaceae that are known to bear large fleshy fruits)*. Teach there how to cut away or cut around.

Rupturing (is to be taught) on the leather or hide bags, the bladders and the sewn up sacks filled with water or mud. *Scarification* (is to be demonstrated) on stretched, hairy skin; *penetration,* on the veins of dead animals or the lotus stalk; *probing.* on the worm-eaten wood, bamboo, reeds, hollow stalks and dried mouth of the *alabu* fruits; *extraction,* on the jack fruits, as well as the fruit pulp of *bimbī* or *bilwa* and also the teeth of dead animals; *draining,* on a plank of the silk cotton tree smeared with wax; *suturing* on a thin or a coarse cloth-end or the ends of the skin; *bandaging,* on the organs and limbs of the dummies; *joining* of the ear joints, on the soft flesh and muscles or the tubes of the lotus stalk; *cauterisation* by fire or caustics, on chunks of soft flesh; and *application (of unguents)* to eye, *carrying out enema,* and *evacuation for the wound* as well as the *pressing* about, on a water-filled jar with a side exit or the mouth of the *alābu* fruit.

एवमादिषु मेधावी योग्यार्हेषु यथाविधि।
द्रव्येषु योग्यां कुर्वाणो न प्रमुह्यति कर्मसु।
तस्मात् कौशलमन्विच्छन् शस्त्र क्षाराग्नि कर्मसु। यस्य यत्रेह साधर्म्यं तत्र योग्यां समाचरेत्।

A student who is made fit by such and many other measures and gets trained well on many similar materials as per the prescribed methods will not get confounded when an actual work confronts him. Therefore, he who seeks expertise in the three types of surgery we speak of here, viz., by instruments, caustics and fire - he should train himself on anything, even other than what has been indicated here (as well), that suits his (specific) purpose and need. Ss. su. 9. 3-6.

e. *wounds*

(The subject of wound is dealt with very detailedly and thoroughly in Sustruta. In fact, there are some interesting and 'new' aspects. Two of them are: (i) specifications of the pain (whose varieties themselves are given very vividly) and the other afflictions (e.g., dehydration and rise in the temperature, etc.) as they vary as per the categories of the wound concerned, almost *diagnostically* (for e.g. a *vata* wound would differ from the *pitta* wound, the former being more painful and the latter, more hot, etc.); (ii) variations of the discharges from the wound as an index to the principal *dhatu* involved - there being in fact a term *vraṇa srava vignāna*, the science of the discharges from the wound. More importantly the wound is definitely conceived of as a developmental phenomenon where, in addition, a strict clinical regimen of treatment based on the factor of time or *kriyā kāla* is also stipiulated. All of this is very much in consonance with the spirit of modern science).

(i) *a probe into the raw and the ripening of morbid swellings (Ss. 17) - A general enquiry*

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16. शोफ समुत्थाना ग्रन्थिविद्रध्यजली प्रभृतयः प्रायेण व्याधयोऽभिहिता अनेकाकृतयः, तैर्विलक्षणः पृथुग्रथितः समो विषमो वा त्वग् मांसस्थायी दोष संघातः शरीरैकदेशोत्थितः शोफ इत्युच्यते।

Granthi (a glandular swelling), vidradhi (an abscess) and *alajī (an inflammation of the corner of the eye: these three examples represent what is large, medium and minute and hence comprehend all possible types of morbid swellings)* are (all) probably a gathering together of the morbidity for swelling (in the same manner as the clouds in a sky that gather together at a particualr and a localised upraisings; that then) receive specialised names such as *granthi, vidradhi, alajī*, etc. They are of varied shapes and peculiar characteristics, extensively knotted, even or uneven; situated in skin or flesh and represent the collection of the vitiations that has occurred in a single localised place in the body and is thus called *śhopha* (a morbid swelling, technically).

स षट् विधो वात पित्त कफ शोणित सन्निपातागन्तु निमित्तः। तस्य दोष रूप व्यंजनैर्लक्षणानि व्याख्यास्यामः।

This is of six kinds: caused by vitiation of *vāta, pitta, kapha*, blood, *sannipāta* (aggregation or permutation of these three) and accidents. We shall narrate their characteristics as revealed by (i.e., in terms of) the vitiating factor concerned and the (morphological) appearance of the case (as follows):

तत्र वात शोफः कृष्णोऽरुणो वा परुषो मृदुरनवस्थितास्तोदायाश्चात्र वेदनाविशेषा भवन्तिः पित्त शोफः पीतो मृदुः सरक्तो वा शीघ्रानुसार्योषादयश्चात्र वेदनाविशेषा भवन्तिः श्लेष्मश्वयथुः पाण्डुः कठिनः स्निग्धः शीतो स्निग्धो मन्दानुसारी कण्ड्वादयश्चात्र वेदना विशेषा भवन्तिः सर्व वर्ण वेदनः सन्निपातश्वययुः; पित्तवत् शोणितजोऽतिकृष्णश्च, पित्त रक्तलक्षण आगन्तुर्लोहितावभासश्च।

(1) *Vāta śhopha* is pink or dark, rough (to touch) and soft (in consistency). The speciality of the pain and the other distresses (*these are three: osha, cosha and dahaheat or increase in temperature, dehydration or desiccation and burning*), here, is that they are unsettled (i.e., sometimes increasing and sometimes decreasing and also intermittent). (2) The *pitta śopha* is yellow (ish), soft, sticky or of a blood (red) colour. The speciality of the pain here is the *oṣha* or the heat and the like develop quickly. (3) *Śleṣma śhopha* is pale or white, hard, cold and viscous. The speciality of the pain (here) is: itching, a heaviness and loss of sensation. These develop slowly. (vi) *Sannipāta śhopha* has the (features of the) colour and the pain of all of these types. (v) The blood *śhopha* of the *accident* has the characteristics of those of *pitta* and blood, (and there will always be an) appearance of a redness of colour.

स यदा बाह्याभ्यन्तरैः क्रियाविशेषैर्न संभावितः प्रशमयितुं क्रियाविपर्ययात् बहुत्वाद्व दोषाणां तदा पाकाभिमुखो भवति। तस्य आमस्य पच्यमानस्य पक्वस्य च लक्षणमुच्यमानमुपधारय-तत्र मन्दोष्मता त्वक् सवर्णता शीतशोफता स्थैर्य मन्द वेदनताऽल्प शोफता च आम लक्षणमुद्दिष्टः सूचिभिरिव निस्तुद्यते, दश्यत इव पिपीलिकाभिः, ताभिश्च संसर्प्यत इव, छिद्यत इव शस्त्रेण, भिद्यत इव शक्तिभिः, ताड्यत इव दण्डेन, पीडयत इव पाणिना, घटयत इव च अंगुल्या, दह्यते पच्यत इव च अग्निक्षाराभ्याम् ओष घोष परीदाहाश्च भवन्ति, वृश्चिक विद्ध इव च स्थानासन शयनेषु न शान्तिमुपैति आध्मात बस्तिरिवाततश्च शोफो भवति, त्वग्वैवर्ण्यं शोफाभिवृद्धिर्ज्वरदाहपिपासा भक्तारुचिश्च पच्यमानलिंगं, वेदनोपशान्तिः पाण्डुताऽल्पशोफता वलीप्रादुर्भावस्त्वक्परिपुटनं निम्नदर्शनम् अंगुल्याऽवपीडिते प्रत्युन्नमनं, बस्ताविवोदक संचरणं पूयस्य प्रपीडयत्येकमन्तमन्ते च अवपीडिते, मुहुर्मुहुस्तोदः कण्डूरुन्नतता व्याधेरुपद्रव शान्तिर्भक्ताभिकांक्षा च पक्वलिंगम्। कफजेषु तु रोगेषु गम्भीर गतित्वादभि घातजेषु वा

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केषुचिदसमस्तं पक्वलक्षणं दृष्ट्वा पक्वमपक्वमिति मन्यमानो भिषग् मोहमुपैतिः तत्र हि त्वक् सवर्णता शीतशोफता स्थैर्यमल्परुजताऽश्मवच्च घनता, न मोहमुपेयेदिति।

When these *shophas* (of the several types) cannot be calmed down by external or interal medicative actions either because of their own abnormal activities or the excesses of the vitiations, we should know then, that they have started ripening.

We shall (now) tell (their) characteristics (as to) when they are (i) raw, (ii) have startedripending and (iii) have ripened (fully). (i) Only a slight increase in the temperature, (but the geneal) colour (remaining) similar to that of the rest of the skin; a coldness to the touch, hardness, a slight pain and (only) a little swelling – these characterise a *śhopha,* that is unripe (viz., raw). (ii) *(The details of the distresses that will arise when the morbid swelling starts ripening are now given vividly as follows. In general these are of two types; a mere paining or a regular burning sensation: the details are:* ✱ This *pains as* if needles are pricking (there), or as if ants are biting or are wandering or crawling about, or as if it is being cut by a weapon or broken by the *śakti śastra (a powerful cutting weapon of those times)* or being beaten by a stick or (as if it is) being pressed down by hands or pounded by the fingers. (This) *burns* as if (the region is being) cooked (there) by fires and caustics. (There will) also occur (a general sensation of) burning, desiccation and such an excess of heat as if it (i.e. the whole region there) is being cauterised (*parīdāha*). (The patient) will not get peace by sitting or sleeping in a place (and is in fact, restless) – as if he is stung by a scorpion. The swelling (of the *śhopha*) arises (quickly and pronouncedly) as if it is a stretched and blown up baloon. The colour of the skin changes. The intumescens increases (on the whole). Fever, raise in the temperature and thirst as well as disinclination to eat (*bhaktā -ruci*) prevail. These are the symptoms of a ripening *śhopha.* (iii) A quickening of the pain, a paleness, a slightness of the swelling, an appearance of a wrinkling, a peak formation of the skin, an appearance of depressions, a rebounding if pressed by the fingers, a movement of the pus as if water moves about in a sac, a depression at one place if pressed by the finger (followed by an appearance of) an outward pressure somewhere else, a pricking pain again and again a heightening of the itching, a quickening of the minor irritations of the diseases and an onset of the desire for food – these are the signs of a *ripened sopha*

In the diseases born of *kapha* since the seat of the malady (here) is deep or in some types of (*keṣucit*) lesions born of injury, the physician is likely to get confused that a ripe *śhopha* is still unripe, as he would be detecting incomplete characteristics of ripening there. (In such cases) even if there is a similarity with the skin colour, a coldness to touch, a stoutness, a slightness of pain and a solidity like (that of) a stone (*viz., all the usual characteristics of unripeness*), he should not get confused (that it is unripe).

आमं विपच्यमानं च सम्यक् पक्वं च यो भिषक्। जानीयात् स भवैद्यैः शेषास्तस्कर वृत्तयः।।

✱ The specifications of the pains and the burns given here are picturesque but fully subjective. But this is most effective and unforgetably vivid. For e.g., a pain causing a sensation of several ants crawling over a region is best described in that analogy only and none other.

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He who understands (in such ways and unambiguously) that a morbid swelling or *śhopha* is (i) raw, (ii) ripening and (iii) ripe he alone is fit to be a physician. The rest are professional thieves.

वाताहते नास्ति रुजा न पाकः पित्तादृते नास्ति कफाश्चपूयः ।।
तस्मात् समस्तान् परिपाककाले पचन्ति शोफांस्त्रय एव दोषाः ।।
कालान्तरेण अभ्युदितं तु पित्तं कृत्वा वशे वात कफौ प्रसह्य।
पचत्यतः शोणितमेव पाको मतोऽपरेषां विदुषां द्वितीयैः ।।

If one excludes *vāta* there is no pain. There is no ripening if *pitta* is excluded and no pus if *kapha* is omitted. Therefore, at the time of its ripening, all these three *doṣas* – co-operate with one another and cook (*or bring about the chemical action required, for*) the (*raising up of the*) morbid swelling or *śhopha*. Other experts however opine that, it is the *pitta* (alone, and not, all the three), that gets sometimes augmented, enslaves by its own power, *vāta* and *kapha* and (then) cooks these (two) as well as the blood. This is the other opinion concerning the (process of) *pāka* (or ripening of a wound). (*This is a clear indication of Susruta's reference to other unspecified Texts of his times*).

तत्र आमच्छेदे मांस शिरास्नायु सन्ध्यस्थिव्यापादनमति मात्रं शोणितातिप्रवृत्ति र्वेदना प्रादुर्भावोऽवदरणमनेकोप द्रवदर्शनं क्षतविद्रधिर्वा भवति। स यदा भय मोहाभ्यां पक्वमपि अपक्वमिति मन्यमानः चिरमुपेक्षते व्याधिं वैद्यः तदा गम्भीरानुगतो द्वारमलभमानः पूयः स्वमाश्रयम् अवदार्य उत्संगं महान्तं अवकाशं कृत्वा नाडीं जनयित्वा कृच्छ्रसाध्यो भवत्यसाध्यो वेति।

If a surgeon opeate open raw intrumescence, there may ensure a destruction of muscles, veins, tendons, bones and joints; excess of blood flow; appearance of pain; rupture of muscles; and appearance of many minor irritations, lesions or abscesses. If by fear or confusion regarding the ripe, as unripe he neglects the disease for long, the pus since it does not get an opening-out, and it has (already) gone very deep within, splits its own place out, makes an *utsanga* (*utsanga is a technical term for a morbidity that has gone to its deepest possible lodgement in a tissue: the surgeon has to carry out his act till this is removed*), and (creates) a large collection spot (*āśraya*) for itself, generates a knot and becomes difficult if not impossible for treatment.

यश्छिनत्ति आममज्ञानाद्यश्च पक्वमुपेक्षते। श्वपचाविव मन्तव्यौ तावनिश्चितकारिणौ।।

A surgeon who cuts open the unripe and neglects the ripe, consider them both as dog-eaters, who are of uncertain activity.

प्राक् शस्त्रकर्मणश्चेष्टं भोजयेदातुरं भिषक्।।
मद्यपं पाययेन्मद्यं तीक्ष्णं यो वेदनाऽसहः ।।
न मूर्च्छत्यन्न संयोगान्मत्तः शस्त्रं न बुध्यते।
तस्मादवश्यं भोक्तव्यं रोगेषु उक्तेषु कर्मणि।
प्राणो हि आभ्यन्तरो नृणां बाह्य प्राण गुणान्वितः। धारयत्यविरोधेन शरीरं पांच भौतिकम्।।

Before one starts operation, make the patient eat his food and if he is habituated to take liquor, let him drink some strong liquor that can help him to bear

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the pain of surgery.* Since he has food, the patient will not fall unconscious and the intoxiated will not understand the surgical instrument. Therefore, the paitent should necessarily be fed for those diseases where it is prescribed. Man's internal life is as per the food (which is in fact) the external *praṇa,* that he consumes. The two together bear the body that is of the five *mahābhutas,* (viz., he should take care not to emaciate either the internal life or the external food).

अल्पो महान् वा क्रियया विना यः समुच्छ्रितः पाकमुपैति शोफः।
विशाल मूलो विषमं विदग्धः स कृच्छ्रतां यात्यवगाढ दोषः।
आलेप विस्रावण शोधनैस्तु सम्यग्प्रयुक्तैर्यदि नोपशम्येत्।।
पच्येत शीघ्रं सममल्पमूलः स पिण्डितोश्चोपरि चोन्नतः स्यात्।।
कक्षं समासाद्य यथैव वह्निर्वाय्वीरितः संदहन्ति प्रसह्य।
तथैव पूयोऽप्यविनिःसृतो हि मांसं सिराः स्नायु च खादतीह।।

A morbid swelling or *shopha* that has arisen, small or big if it ripens without any medicative actions like ointment, etc., (it will then) get an extensive base, (becomes) uneven and highly burnt up or decomposed (*vidagdha*), gets lodged in a deep place and is thus difficult to be treated,. If the *śhopha* is not palliated by proper ointment, draining and cleaning, it will (then) ripen quickly, (becomes) even and small based and soon stands out as a specially uplifted (and distinctive) outgrowth. As the fire entering a room and blown by the wind eats out everything inside, similarly the pus, if not drained out, eats up the flesh, the veins and the tendons and ligaments. Ss. su. 17. 3-16.

आदौ विम्लापनं कुर्यात् द्वितीयं अवसेचनम्।
तृतीयं उपनाहं तु चतुर्थीं पाटन क्रियाम्।।
पंचमं शोधनं कुर्यात् षष्ठं रोपणमिष्यते।
एते क्रमा व्रणस्योक्ताः सप्तमं वैकृतापहम्।।

(ii) *a regimen of treatment* In treating the *sopha,* the first (step is to) carry out a general softening of the tissue (*vimlāpana,* by bathing or slow sudation); the second is sprinkling (*avasecana*); the third is tieing up or application of poultice (*upanāha*); the fourth is splitting open (*pāṭana*); the fifth is cleansing (*sodhana*); the sixth is healing (*ropana*) and, the seventh is the removal of the scar or the abnormality introduced (say, for instanced, by the surgeon's knife itself - *vaikṛtapaharaṇa*). This is the prescribed regimen of treatment. Ss. su. 18. 17, 18.

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* This is probably the only place where something similar to anaesthesia is mentioned in SS. It is rather inexplicatble how such bold surgery as SS itself describes at many places could be carried on without the use of anaesthesia. Bhoja prabandha, a Text of Medieval periods mentions *moha curṇa* a powder that would bring about loss of consciousness. Was this used in Susruta's times? Or, why were not the many plants known to these authors for their actions on consciousness used in this way. One such plant is *dhattura,* whose other famous name is *unmatta* - causing a derangement of the mind. The subject of whether anything like anaesthetising the patients was known at all is worth exploring even in ancient Texts of War, where *sam-mohini vidya* was one of the skills of a warrior, by which he could put the enemy in a state of unconsciouusness, which would disappear after sometime.

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आलेप आद्य उपक्रमः
एष सर्व शोफानां सामान्यः प्रधानतमश्च,
तं च प्रतिरोंगं वक्ष्यामः ततो बन्धः प्रधानं, तेन शुद्धिर्वण रोपणमस्थिसन्धिस्थैर्यं च।

b. *Ointment and bandaging*

17. Applying the ointment is the first step. This is comon to all *śhophas* and is also the most pre eminent step. We shall (later on) tell the full details thereof (i.e., the variations in the ointment that are needed) in connection with every disease. Next to this is bandaging. By this we secure cleanliness, healing and also a firmness (as far as) the bones and the joints (are concerned). SS. su. 18.3.

स त्रिविधः प्रलेपः प्रदेह आलेपश्च। प्रलेप प्रदेहयोरन्तरं - तत्र प्रलेपः शीतस्तनुरविशोषी विशोषी वाः प्रदेहस्तु उष्णः शीतो वा बहलोऽबहुरविशोषी चः मध्यमोऽत्र आलेपः।

Ointments are of three kinds; salve or unguent (*pralepa,*) poultice and unction (*pradeha*) and ointment per se (*ālepa*). The differences among them are: salve is cold and thin; this may be (i) one that does not dry or (ii) one that dries. Poultice is hot or cold, thin or copious (but always) non-drying. (iii) Ointment is in between (i.e., as far its coldness-hotness or drying non-drying nature is concened). Ss. su. 18.6.

तत्र प्रतिलोममालिम्पेत्। प्रतिलोमे हि सम्यगौषधमवतिष्ठतेऽनुप्रविशति च रोमकूपान् स्वेद वाहिभिश्च सिरामुखैर्वीर्यं प्राप्नोति।

Smear the ointment against the direction of the haris and not along. if (smeared in this way) against, the medicine will lodge itself well and also enter the hair pits properly. Ss. su. 18.4

(ii) *care of the wounded*

17. व्रणितस्य प्रथममेवागार मन्विच्छेत्; तच्चागारं प्रशस्तवास्त्वादिकं कार्यम्।
प्रशस्त वास्तुनि गृहे शुचावातपवर्जिते। निवाते न च रोगाः स्युः शारीरागन्तुमानसाः।।
तस्मिन् शयनमसंबाधं स्वास्तीर्णं मनोज्ञं प्राक्शिरस्कं सशस्त्रं कुर्वीत।
सुख चेष्टाप्रचारः स्यात् स्वास्तीर्णे शयने व्रणी। प्राच्यां दिशि स्थिता देवास्तत्पूजार्थं च तच्छिरः।।
तस्मिन् सुहृद्भिरनुकूलैः प्रियंवदै रुपास्यमानो यथेष्टमासीत।
सुहृदो विक्षिपन्त्याशु कथाभिव्रणविदनाः। आश्वासयन्तो बहुशः स्वनुकूलाः प्रियंवदाः।।

a. *Hospital and special wards* ? First itself arrange for a house to the patient. This house moreover should have been made out of excellent architectural considerations and the like. By dwelling in a house constructed as per the (requisite) and well acclaimed architectural specifications (and, which is also) clean and free from direct wind and sun, one will not get physical, accidental or mental diseases. Prepare a bed there that is having no points of discomfort (whatsoever and is also) wide, covered with a pleasing counterpan and (having) a pillow facing the east and (also) equipped with minor surgical instruments (there itself). Lying in a wide bed, the patient can turn and move about with ease. Gods reside in the east. To worship them (therefore) the head (of the patient) should be at the east. Here, attended by

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his own favourably (disposed) friends who talk pleasantly, the patient should take rest as he pleases. Friends remove out the pain of the wounds by nice stories; they will (also) reassure him by conversing on many favourable topics. Ss. su. 19. 3-8.

न च दिवानिद्रावशगः स्यात्। दिवास्वप्नाद्व्रणे कण्डूर्गात्राणां गौरवं तथाश्वयथुर्वेदनारागः स्रावश्चैव भृशं भवेत्।।

उत्थान संवेशन परिवर्तन चङ्क्रमणोच्चैर्भाषणाद्यासु आत्मचेष्टासु अप्रमत्तो व्रणं संरक्षेत्।
स्थानासनं चङ्क्रमणं दिवास्वप्नं तथैव च। व्रणितो न निषेवेत शक्तिमानपि मानवः।।
उत्थानाद्यासनं स्थानं शय्या च अतिनिषेविता। प्राप्नुयान्मारुतादंग रुजः तस्माद् विवर्जयेत्।।
गम्यानां च स्त्रीणां संदर्शन संभाषण संस्पर्शनानि दूरत एव परिहरेत्।

b. *a geneal instruction to the patient.* Lying in such surroundings (however) the paitent should *not* sleep by day. (If he indulges thus in) sleeping by day there may arise at the wound (a further) itching (and also) a certain amount of heaviness of the body, a swelling or an oedema, a pain, a (strong) colouration and (also) much of a drainage. (Moreover), the patient should not be careless while standing up, sitting down, turning around, pacing about, talking aloud and in doing (all) such other self indulged activities and (in this manner take adequate precautions to) protect his (own) injury. Even if strong, he should not indulge in (too much of a) sitting up, or pacing about, or sleeping by day. If he stands up, sits down, keeps standing or sleeps too much he is likely to get pain in the body because of (the stimulation he causes thereby to) *vāta*. Therefore (all of) these (activities) should be given up. He should (also) give up from the (very) distance itself the seeing, the talking, or the touching of the desirable ladies. Ss. su. 19. 9-14.

(Then there are the details of dietetics, i.e., what types of food (vegetarian as well as non-vegetarian) the patient should avoid and why; other precautions of eating, conduct and keeping up one's mentality and mood; how should he keep his body while under treatment; protective amulets he may wear; nutritious foods, that promote quick healing and relief and the list of the vegetables that are particularly favourable. In the last category are included; *tanḍulīyaka, jīvanti, suniśannaka, vāstuka, bāla mūlaka, vārtāka, patola, kāravellaka, dāḍima* and *āmalaka*).

दिवान निद्रावशगो निवातगृहगोचरः। व्रणी वैद्यवशे तिष्ठन् शीघ्रं व्रणमपोहति।।
एवं वृत्त समाचारो व्रणी संपद्यते सुखी। आयुश्च दीर्घमाप्नोति धन्वन्तरिवचो यथा।।

The wounded patient who does not sleep by night, moves about (only) in the place well protected from wind, etc. (*the special wards?*) and stays (thus, always) under the custody of the (attending) physician (*vaidya vaśe*) will get rid of his wound quickly. Conducting (*vrtta*) himself in these manners and carrying out all these measure (*samācāra*) the wounded will become happy. He will also attain a long span of life. This is as Dhanwantari says (and therefore indubitable). Ss. su. 19. 35, 37.

18. एतानि खलु दोष स्थानानिः एषु संचीयन्ते दोषाः। प्राक् संचय हेतुरुक्तः। तत्र संचितानां खलु दोषाणां स्तब्धपूर्णकोष्ठता पीतावभासता मन्दोष्मता च अंगानां गौरवम् आलस्यं चय कारण विद्वेष श्चेति लिंड्गानि भवन्ति। तत्र प्रथमः क्रियाकालः।

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(iii) *A regimen for therapy: kriya kala*:

These (above mentioned) are the places of the dosas. (Actually) the dosas (only) get collected here (*when they reach a state of imbalance, otherwise, they are found everywhere*). We have told earlier the reaons for their collection. If the dosas get collected in these places, the symptoms (that) would ensue are: still and full visceral cavity, an appearance of an yellowness, dull heat, heaviness of the limbs, laziness and hatred to assimilation (i.e., *caya*). This is the first stage for treatment of the wound.

19. अत ऊर्ध्वं प्रकोपणानि वक्ष्यामः । तत्र बलवद्विग्रहातिव्यायाम व्यवायाध्ययन प्रपतन प्रधावन प्रपीडन अभिघात लंघन प्लवन प्रतरण रात्रि जागरण भारहरण गज तुरग रथपदाति चर्या..

We shall now tell how these *doṣas* get aggravated. (*This aggravation comes about because of the details on the part of the patient of his (a) conduct, (b) mental attitude, (c) food taken and (d) conditions of climate.* We mostly omit here the details of food *though these are very well specifed in the Text*. Some details of the other causes are:) quarreling with a powerful enemy; too much exercise, too much cohabitation or too much study; falling down from a height; running fast; too much pressure; injury, fasting, swimming, crossing across (a river), walking by night, weight-lifting; travelling on elephant, horse, chariot or palanquin. (*Note how detailed and close fitting to the reality is the obervation to the times that SS provides here as well as in what follows below*).

सशीताभ्रप्रवातेषु घर्मान्ते च विशेषतः । प्रत्यूषस्यपराह्ने च जीर्णेऽन्ने च प्रकुप्यति ।।

This (i.e., the *dosa*) is aggravated in cold, cloudy and windy weather and specially at the end of summer. When it is about to dawn or in the afternoon, the digested food gets aggravated.

क्रोध शोक भयायासोपवास विदग्धमैथुनोपगमन कट्वम्ल लवण तीक्ष्णोष्ण लघु विदाहि तिल तैल पिण्याक कुलत्थ सर्षपातसी हरितकशाक गोधा मत्स्याजाविकमांस दधि तक्र कूर्चिकामस्तु सौवीरक सुराविकाराम्ल फल कट्वरप्रभृतिभिः पित्तं प्रकोपमापद्यते ।

Rancour, grief, fear, fatigue and fast; eating burnt up (i.e., carbonised) food; addiction to cohabitation; (much consumption of) bitter, sour, salt, pungent, hot, light and scorching (food); sesame, sesame oil cake, *kulattha*, mustard, *atasi, haritaka* vegetable, the *godha* fish, the flesh of *ajavika* (sheep and goats), curds, buttermilk, *kurcika* (a preparation from the milky juice of a bulbous root), *mastu* (whey or sour cream), *sauviraka* (sour gruel), wine, *āmla phala* (acidic fruit), *kaṭvara* (butter-milk mixed with water) and the like bring about the *pitta* to aggravation.

तदुष्णै रुष्ण काले च घनान्ते च विशेषतः । मध्याह्नेच अर्धरात्रे च जीर्यत्यन्ने च कुप्यति ।।

This (*pitta*) is (also) aggravated by hot foods and in the hot season, particularly at the end of the cloudy season, on the afternoons as well as midnight and when the food is just getting digested.

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दिवास्वप्ना व्यायामालस्य मधुराम्ल लवण शीत स्निग्ध गुरुपिच्छिल्लाभिष्यन्दि हायनक यवक नैषधेत्कट माष महामाष गोधूम तिल पिष्टविकृति दधि दुग्ध कृशर पायसेक्षुविकारानूपौदक मांसवसा बिसमृणालकसेरुक श्रृंगाटकमधुरवल्लीफल समशनाध्यशन प्रभृतिभिः श्लेष्मा प्रकोपमापद्यते।

Sleeping by day; non-exercise (of any sort); laziness; consuming sweet, sour, salt, cold, viscous, heavy and slimy food; eating starchy preparations, the spicy adjuncts, *hāyanaka, yavaka, naiṣadha, itkata, māṣa, maha maṣa, godhuma, tila;* or (prepared foods like), curds milk, kṛsara, payasa (a sweet liquid preparation with milk), sugar cane prepaations; the flesh of the animals of swamp and water; animal fat; lotus stalk, *kaseruka, sringāṭaka, madhura vallīphala* eating promisciously (*samaśana*) and eating before the previous meal is digested (*adhyaśana*) bring about aggravation of the *śleṣma*

स शीतैः शीतकाले च वसन्ते च विशेषतः। पूर्वाह्ने च प्रदोषे च भुक्तमात्रे प्रकुप्यति।।

By cold stuffs, in cold seasons and specially the spring, in the morning, at dust or dawn, and immediately after eating, the *śleṣma* is succeptible of getting aggravated. Ss. 21. 18-24.

अत ऊर्ध्वं सर्व व्रणवेदनां वक्ष्यामः - तोदन भेदन ताडनच्छेदन आयामन मन्थन विक्षेपण चुमुचुमायन निर्दहन अवभंजन स्फोटन विदारण उत्पाटन कम्पन विविध शूल विश्लेषण विकिरण स्तम्भन पूरण स्वप्न आकुंचन अङ्कुशिकाः संभवन्ति, अनिमित्त विविध वेदना प्रादुर्भावो वा मुहुर्मुहु यत्र आगच्छन्ति वेदनाविशेषाः ता वातिकमिति विद्यात् ओष चोष परिदाह धूमायनानि यत्र गात्रमङ्गारावकीर्णमिव पच्यते यत्र च ऊष्माभिवृद्धिः क्षते क्षारावसिक्तवच्च वेदनाविशेषाः तं पैत्तिकमिति विद्यात्; पित्तवद्रक्त समुत्थं जानीयात्; कण्डूः गुरुत्वं सुप्तत्वं उपदेहो अल्पवेदनत्वं स्तम्भः शैत्यं च यत्र तं श्लैष्मिकमिति विद्यात्; यत्र सर्वासां वेदनानां उत्पत्तिः तं सन्निपातिकमिति विद्यात्।

(iv) *Specification of the pains.*

We shall now tell about the pains that all possible types of wounds generate. (They can be best described by such approximate terms as follows:) as if there is a needle pricking, a breaking, a hitting, a cutting, a stretching, a churning, a throwing, an itching, a burning, a smashing, an exploding, a cleaving, an uprooting, a throbbing, a dissolution or a radiation or diverse types of shooting pains, a filling, a stopping, a loss of sensation at the skin, a contraction or a goading by the *ankus* (the instrument or goad for directing the elephant). If there is the appearance of a diversity of pain and if these interruptedly come and go, know that such an affliction is due to *vāta* trouble. Where heat, dehydration and burning and a feeling as if smoke is coming out of the wound (*dhumayana*, i.e., is steaming) prevails and there is a cooking up of the body as if a burning coal is spread on it and moreover, where there is a (constant) rise in temperature and (particularly) at the lesions (concerned) there is a pain as if a caustic material is (being) sprinkled over it, know that such a pain is of the *pitta* category. Consider the *blood born* wound also as being similar to the *pitta* wound. Where there is an itching, a heaviness, a loss of sensation, a feeling of being covered all over with an ointment, a mild pain, a stiffening or a rigidity and a coldness, you should presume it to be of *śleṣma*. Where there is a pain of all these sorts, consider it to be of *sannipata*. Ss. su. 22. 11.

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20. अत ऊर्ध्वं व्रण वर्णान् वक्ष्यामः - भस्म कपोतास्थिवर्णः परुषोऽरुणः कृष्ण इति मारुतजस्यः नीलः पीतो हरितः श्यावः कृष्णो रक्तः पिड्.गलः कपिल इति रक्तपित्त समुत्थयोः, श्वेतः स्निग्धः पाण्डुरिति श्लेष्मजस्यः सर्व वर्णोपेतः सान्निपातिक इति।

(v) *colours of the wounds.*

Hence forth, we shall tell about the colours of the wound. The *vāta* wounds have the colour of ash, dove or bone; it is rough to touch, pink and dark. The wounds of blood and *pitta* are blue, yellow, green, dark, brown, black, red, reddish brown or tawny. The *ślesma* wound is white, dense or pale. The *sannipātaka* is of all colours.

न केवलं व्रणेषु उक्तो वेदनावर्ण संग्रहः। सर्व शोफ विकारेषु व्रणवत् लक्षयेत् भिषक्।।

It is necessary to note that the collection (i.e., the full list we have enumerated) of the pains and colours narrated above is not meant (to be applicable) only for the wounds. The physician should consider that similar is the case (i.e., they hold good) for all the possible kinds of the morbid swellings as well as the abnormalities. Ss. su. 22. 12, 13.

f. *some details of surgery.*

(i) *The eight kinds of operations and their relevant clinical conditions*

21. (The eight kinds are (as told earlier): excision, incision, scarification, puncturing, probing, extraction, draining and suturing. The clinical situations where these become advisable are now specified).

छेद्या भगन्दरा ग्रन्थिः श्लैष्मिक स्तिलकालकः। व्रण वर्त्मार्बुदान्यर्शैश्चर्मकीलोऽस्थिमांसगम्।।
शल्यं जतुमणिर्मांससंघातो गलशुण्डिका। स्नायु मांस सिरा कोथो वल्मीकं शतपोनकः।।
अधुषश्चोपदंशाश्च मांसकन्द्यधिमांसकः।

(*Excision* is done in the following diseases); fistula, glands due to *slesma*, small dark moles like sesame seeds (*tilakālaka*); (along) pathways of the wounds; tumours, piles, warts; the *śalya* of the bone and the flesh; mole (*jatumaṇi*), fleshy mass, a swelling of the uvula; a gangrene (*kotha*) of the tendons, the flesh and the veins; swelling of the neck, the chest or other parts of the body; elephantiasis; fistula in ano; suppurative tonsilities; *upadamsa* (a kind of venereal disease); fleshy protuberance, bulbous or hypertrophic.

भेद्या विद्रधयोऽन्यत्र सर्वजात्ग्रन्थयस्त्रयः। आदितो ये विसर्पाश्च वृद्धयः सविदारिकाः।।
प्रमेहपिडकाः शोफः स्तन रोगोऽवमन्थकः। कुम्भीकानुशयी नाडयौ वृन्दौ पुष्करिकालजी।।
प्रायशः क्षुद्र रोगाश्च पुप्पुटौ तालु दन्तजौ।।
तुण्डिकेरी गिलायुश्च पूर्व ये च प्रपाकिणः।
बस्तिस्तथाऽश्मरीहेतो र्मेदोजो ये च केचन।।

incision is done for the following; all abscesses excepting those that are due to the *sannipāta* (i.e., all the *doṣas* acting together); the gandulars wellings of all the three *dosas*; the erysipelas due to all of the three *doṣas* again (such as)

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enlargement of the scrotum, hydrocoele, accompanied with lacerations, urinary pustules, morbid swellings diseases of the breast, swellings caused by boils or contusions (*avamanthaka*), hordeolum or stye of the eye *(kumbhīka*), fistulous sore that runs along (*anusayi*), the tubular vessels (*nāḍya*), the two types of tumors in the throat *(vṛndau),* the abscess on the penis *(pushpika*), *alaji* , mostly all types of the minor diseases, swellings of the palate and the gums *(tālu, danta puppuṭa*), a large boil on the palate *(tuṇḍikeri),* the hard tumour in the throat (*gilayu*) and those that cause inflammations of the buccal cavity very early itself and for the *basti* meant for removing the urinary calculus and the other diseases due to fat (*meda*).

लेख्याश्चतस्रो रोहिण्यः किला समुपजिह्विका। मेदोजो दन्तवैदर्भो ग्रन्थिर्वर्त्माधिजिह्विका।। अर्शांसि मण्डलं मांसकन्दी मांसोन्नतिस्तथा।

Scarification is done for the four types (due to *vata,pitta, kapha* and blood) of the *rohiṇi* (*diptheria*), the inflammation below the tongue (*upajihvikā*), the piles, the zonal leprosy *(maṇḍala),* the fleshy protuberance (*māmsa kandi*), fleshy elevations (*māmsonnati*), fat born gum boil at the teeth, glandular swellings (*granthi*), disease of the eyelid (*vartma*) and swelling on the upperside of the tongue (*adhijihvikā*).

वेध्याः सिराबहुविधा मूत्रवृद्धिर्दकोदरम्।
एष्यानाड्यः शर्कारास्तिस्रो व्रणा उन्मार्गिणाश्च ये।
आहार्याः शर्कारास्तिस्रो दन्तकर्णमलोऽश्मरी।।
शल्यानि मूढगर्भाश्च वर्चश्च निचितं गुदे।

The various types of (abnormal, i.e., diseased) veins, the hydrocoele and the ascites are to be *punctured* . The fistulous sore and the wayward wound that still harbour the *śalya* are to be *probed*. The three types of the gravely structures, viz., tartar of the teeth, gravel of the foot and that of the urine,the dirt of the teeth, the wax of the ear and the urinary stone, all types of foreign bodies *(śalya),* the still foetus, and the hardened stools of the rectum, - these should have an *extraction* .

स्राव्या विद्रधयः पंच भवेयुः सर्वजादृते। कुष्ठानि वायुः सरुजः शोफो यश्चैकदेशजः।।
पाल्यामयाः श्लीपदानि विषजुष्टं च शोणितम्। अर्बुदानि विसर्पाश्च ग्रन्थयश्च आदितश्च ये।।
त्रयस्त्रयश्चोपदंशाः स्तनरोगा विदारिका। सुशिरो गल शालूकं कण्टकाः कृमिदन्तकः।।
दन्तवेष्टः सोपकुशः शीतादो दन्त पुप्पुटः।
पित्तासृक् कफजाश्च औष्ठ्याः क्षुद्ररोगाश्च भूयशः।।

Draining is to be carried out in the following: all the five types of abscesses excluding those due to *sannipāta* ; the leprotic region; the painful troubles of the gas; a strictly localised morbid swelling; the diseases of the earlobe; the swellings (in general); the elephantiasis; the poisoned blood; all types of tumours and erysipelas; the first three types of glandular swellings and the three types of venereal diseases (*upadamsa*); the breast disease; the lacerations (in general); the *suṣira* disease of the tooth (hollowed tooth; carries tooth); the shooting sore throat (? *gala saluka*); sharp stinging pain (*kaṇṭaka*); worm infected teeth; gum of the teeth (*danta veṣṭa*) accompanied with the gum-boil (*upa kusa*); *sitada* ; gumboil swelling (*danta pupputa*) of *pitta* , blood, and *kapha* and probably all types of the minor diseases.

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सीव्यामेदः समुत्थाश्चभिन्नाः सुलिखिता गदाः । सद्योव्रणाश्च ये चैव चलसन्धिव्यपाश्रिताः ।।
न क्षाराग्नि विषैर्जुष्टा न च मारुत वाहिनः । न अन्तर्लोहित शल्याश्च ।

In the disease of fat which are well scarified and have undergone rupture as well as the just then caused wounds that are situated at the regions of the movable joints, *suturing* or *stitching* (as the case may be) is to be done. Such a suturing should not be done in those wounds that are affected with caustics, fire or poison or that which is exuding gas or which (still) harbours blood and *śalya* inside.

पांशुरोमनखादीनि चलमस्थि भवेच्च यत् । अहृतानि यतोऽमूनि पाचयेयुर्भृशं व्रणम् ।।
रुजश्च विविधाः कुर्युः तस्मादेतान् विशोधयेत् । ततो व्रणं समुन्नम्य स्थापयित्वा यथा स्थितम् ।।
सीव्येत् सूक्ष्मेण सूत्रेण वल्केन अश्मन्तकस्य वा । शणजक्षौम सूत्राभ्यां स्नाव्या वालेन वा पुनः ।।
मूर्वागुडूची तानैर्वा सीव्येद्वेल्लितकं शनैः । सीव्येद् गोफणिकां वाऽपि सीव्येद्वा तुन्न सेवनीम् ।।
ऋजुग्रन्थिमतो वाऽपि यथायोगमथापि वा देशेऽल्पमांसे सन्धौ च सूची वृत्ताऽङ्गुल द्वयम् ।।
आयता त्र्यंगुला त्र्यस्रा मांसले चाऽपि पूजिता । धनुर्वक्राहिता मर्म फलकोशोदरोपरि ।।
इत्येतास्त्रिविधाः सूची स्तीक्ष्णाग्रः सुसमाहिताः । कारयेन्मालती पुष्प वृन्ताग्र परिमण्डलाः ।
नातिदूरे निकृष्टे वा सूचीं कर्मणि पातयेत् । दूराद्रुजो व्रणौष्टस्य सन्निकृष्टेऽवळुचनम् ।।
अथ क्षौम पिचुच्छन्नं सुस्यूतं प्रतिसारयेत् । प्रियङ्गुअंजनयष्ट्याह्व रोध्र चूर्णैः समन्ततः ।।
शल्लकीफल चूर्णैर्वा क्षौमध्यामेन वा पुनः । ततो व्रणं यथायोगं बद्ध्वाऽऽचारिकामादिशेत् ।।
एतदष्टविधं कर्म समासेन प्रकीर्तितम् । चिकित्सितेषु कात्स्र्येन विस्तरस्तस्य वक्ष्यते ।।

If the dust, the hair, the nail and such other substances and also pieces of movable bone are not taken away from the wound, they (themselves) would cause a dissolution *(pacayeyuh)* of the wound too much and they will (also) create varied types of pains. It is necessary therefore that these things should be removed out completely. In such cases (i.e., after these foreign matters are removed out fully), elevate the rims of the wound well, place them properly as before, suture them with fine threads of the bark or of *asmantaka* (a fibre yielding *Bauhinia*) or of the jute, or silk or the tendons or the horse's hair (*bāla*), the fibre of *murva* or *guḍūci*. Suture slowly as per the *vellitaka* method, i.e., interlacing like a creeper, or the tie of *gophaṇika* (a bandage hollowed out to accommodate chin, nose, etc.) *tunnasevani* (resembling the sutures on a skull) with a straight knob or of whatever form that is required for the occasion.

In the regions where there is less flesh and also at the places of the joints, the needle (that you use for this suturing) should be of two inches length and round headed. In the regions of a greater (amount of) flesh, the needle of three inches and three edged (shape) is the best. For the *marmas*, the scrotum and over the belly, the needle bent like bow is most suited. This is how, there are three kinds of needles; (all however are) sharp and well formed and of the circumference of the top of the stalk of the *mālati* flower.

When stitching the lips of the wound, the needle should neither fall very far nor too near from its previous point. If it is too far, there will be a pain at the lips of the wound and if too near, there may be a tearing of the rim.

Cover the well sutured wound with a piece of silken cloth or cotton, spread it all around with the powder of *priyangu, anjana, yaṣṭyahva* and *rodhra* or the powder of the fruit of *śallaki* or tie the wound as per the prescribed methods and instruct the attendants accordingly (for the further course of action).

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We have thus mentioned in brief the eight kinds of surgery. We shall tell (later) more details about them in the (individual) chapters on treatment. Ss. su. 25.3-29.

22. हीनातिरिक्तं तिर्यक् च गात्रच्छेदनमात्मनः। एताश्चतस्रो अष्टविधे कर्मणि व्यापदः स्मृताः।।
अज्ञान लोभाहित वाक्य योग भय प्रमोहैरपरैश्च भावैः।
यदा प्रयुंजीत भिषक् कुशस्त्रं तदा सशेषान् कुरुते विकारान्।।
तं क्षारशस्त्राग्निभिरौषधैश्च भूयोऽभियुंजानमयुक्ति युक्तम्।
जिजीविषुर्दूरत एव वैद्यं विवर्जयेत् उग्रविषाहि तुल्यम्।।
तदेव युक्तं त्वति मर्मसन्धीन् हिंस्यात् सिराः स्नायुमथास्थि चैव।
मूर्ख प्रयुक्तं पुरुषं क्षणेन प्राणैर्वियुंज्यादथवा कदाचित्।।

Precautions to be taken. The blemishes that can happen in these eight types of surgery are of four types; incomplete cutting, over cutting, oblique cutting and (careless) cutting of the surgeon's finger itself. When a surgeon employs a defective surgery by ignorance, greed, unfavourable employment of the prescribed methods, fear, confusion or by any other possible attitude of the mind, he will then himself create abnormalities in the wound. The person who wishes to live should discard such a physician who after creating such complications himself will then attempt to destroy them by further application of caustics, surgery or cauterisation or medications.

Such a procedure by a foolish surgeon will trouble the *marmas*, the joints, the veins, the tendons and the bones and even kill the patient sometimes, within a minute. Ss. su. 25, 30-33.

23. भ्रमः प्रलापः पतनं प्रमोहो विचेष्टनं संलयनोष्णते च।
स्रस्ताङ्गता मूर्च्छनमूर्ध्ववातः तीव्रा रुजो वातकृताश्च तास्ताः।।
मांसोदकाभं रुधिरं च गच्छेत् सर्वेन्द्रियार्थोपरमस्तथैव।
दशार्धसंख्येष्वपि विक्षतेषु सामान्यतो मर्मसु लिंगमुक्तम्।।
सुरेन्द्र गोपप्रतिमं प्रभूतं रक्तं स्रवेद्वै क्षततश्च वायुः।
करोति रोगान् विविधान् यथोक्तान् छिन्नासु भिन्नासु अथवा सिरासु।।
कौब्ज्यं शरीरावयवावसादः क्रियास्वशक्तिस्तुमुला रुजश्च।
चिराद् व्रणो रोहति यस्य चापि तं स्नायु विद्धं मनुजं व्यवस्येत्।।
शोफातिवृद्धिस्तुमुला रुजश्च बलक्षयः पर्वसु भेद शोफौ।
क्षतेषु सन्धिष्वचला चलेषु स्यात् सन्धिकर्मोपरटतिश्च लिंगम्।।
घोरोरुजो यस्य निशादिनेषु सर्वास्ववस्थासु न शान्तिरस्ति।
तृष्णाऽङ्गसादौ श्वयथुश्च रुक् च तमस्थिविद्धं मनुजं व्यवस्येत्।।
यथास्वमेतानि विभावयेच्य लिंगानि मर्मस्वभिताडितेषु।
स्पर्शं न जानाति विपाण्डुवर्णो यो मांसमर्मण्यभिताडितः स्यात्।।
आत्मानमेवाथ जघन्यकारी शस्त्रेण यो हन्ति हि कर्म कुर्वन्।
तमात्मवानात्महनं कुवैद्यं विवर्जयेदायुरभीप्समानः।।
तिर्यक्प्रणिहिते शस्त्रे दोषाः पूर्वमुदाहृताः। तस्मात् परिहरन् दोषान् कुर्यात् शस्त्रनिपातनम्।।

How to recognise the surgeon's mistakes clinically. If there is a lesion or a puncture in *even five marmas,* there will arise (i.e. the patient will exhibit) a confusion, a loud uproar, a fall, a swooning, an immobilisation, a collapsing (*samlayana*), a heat, a desensitisation, a lameness in the limbs, a swooning, a gasping, an acute pain due to *vāta,* a flow of blood of the colour of a meat wash

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and a loss of sensation in all the sensors (*indriyas*).

If there is a cut or a rupture of the *veins,* there will be an excessive flow of blood, red like the cochineal insect and the *vāyu* aggravated thereby will generate various kinds of diseases as told earlier.

A cut of the *tendon and ligament* would result in a shortening of the limb concerned, a lassitude in the limb and an incapacity to act as well as a surge of turbulent pain, and, the wound (itself will) take a very long time to heal.

A lesion of the *joint* - the movable or the immovable, would result in an excessive increase in the morbid swelling, a turbulent pain, a decline in strength, a break or swelling at the nodes and a cessation of the work of the joint concerned.

A ruptured *bone* would lead to terrible pain night and day (and the patient will find) no calmness in any position of sitting or lying; (he will have) thirst, aching all over the body and a swelling and roughness.

These are the respective characteristics whenever the surgical blemishes occur in the regions of the vein, the *marmas,* the tendons and ligaments and the bones. He who is struck down in a *māmsa marma* (a vital spot of the soft parts), he would not understand touch (i.e., he gets desensitised) and he will (in addition) assume excessive pallour.

The person who desires his life should discard such a despicable physician who injures himself during an operation. The blemishes that arise when the cutting instrument is employed *obliquelty* have been indicated already. Therefore, one should employ the instrument (he uses, taking ample care to) discard all these possible sources of errors. Ss. 25. 34-42.

24. मातरं पितरं पुत्रान् बान्धवानपि च आतुरः। अप्येतानभिशंकेत वैद्ये विश्वासमेति च।।
विसृजत्यात्मना आत्मानं न चैवं परिशंकते। तस्मात् पुत्रवदेवैनं पालयेदातुरं भिषक्।।
धर्मार्थौ कीर्तिमित्यर्थं सतां ग्रहणमुत्तमम्। प्राप्नुयात् स्वर्गवासं च हितमारभ्य कर्मणा।।
कर्मणा कश्चिदेकेन द्वाभ्यां कश्चित् त्रिभिस्तथा।
विकारः साध्यते कश्चित् चतुर्भिरपि कर्मभिः।।

Surgeon's ethics. The patient may doubt his mother, father, sons, or even the relatives but he will have full faith in the surgeon to whom he entrusts himself. He (in fact) abandons himself on his own to the surgeon and will not have any doubt whatsoever on him. It is therefore (highly incumbent) that the surgeon should protect the patient as if he is his own son.

The surgeon who initiates the proper operative procedure in this way, will attain religious merit *(dharma),* money (*artha*) fame and commendation of the good as well as an abiding (place) in the heaven.

Some maladies are cured by a single measure, others by two or three steps or even four. Adopt all that is needed and bring about the desired effects. Ss. su. 25. 43-46.

a few surgical tips: (As there was no x-ray in those times, the location of the *śalya* within the body had to be decided by superficial, clinical examination only. Hence the following hints).

25. तत्र शल्यलक्षणमुच्यमानमुपधारय। तद्विविधं-सामान्यं वैशेषिकं च। श्यावं पिडकाचितं शोफवेदनावन्तं मुहुर्मुहुः शोणितास्राविणं बुद्बुदवदुन्नतं मृदुमांसं च व्रणं जानीयात् सशल्योऽयमितिः सामान्यमेतल्लक्षणमुक्तम्। वैशेषिकं तु-त्वग्गते विवर्णः शोफो भवत्यायतः कठिनश्चः मांसगते शोफाभिवृद्धिः शल्यमार्गानुपसंरोहः पीडनासहिष्णुता चोष

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पाकौ चः पेश्यन्तरस्थेऽपि एतदेव चोष शोफवर्जः सिरागते सिराध्मानं सिरा शूलं सिराशोफश्च, स्नायुगते स्नायु जालोत्क्षेपणं संरंभश्च उग्रा रुक् चः स्रोतोगते स्रोतसां स्वकर्मगुणहानिः, धमनीस्थे सफेनं रक्तमीरयन् अनिलः सशब्दो निर्गच्छति अंगमर्दः पिपासा हृल्लासश्चः अस्थिगते विविध वेदना प्रादुर्भावः शोफश्चः अस्थिविवरगतेऽस्थिपूर्णता अस्थिनिस्तोदः; संहर्षो बलवांश्च, सन्धिगते अस्थिवत् चेष्टोपरमश्चः कोष्टगत आटोपानाहौ मूत्र पुरीषाहार दर्शनं च व्रणमुखात्; मर्मगते मर्मविद्धवत् चेष्टते। सूक्ष्मगतिषु शल्येषु एतानि एव

The characteristics that arise from the *śalyas* (that get lodged in these places) are being told by me know. Listen. This is of two categories; the general and the special. If there is a wound that is dark brown, covered with boils or pustules, has a morbid swelling and/or pain, oozes out blood again and again, (much) elevated like a water bubble and is of soft flesh, know that it is a wound that harbours a *śalya* inside. This is the general character of a wound containing a *śalya*.

The special characteristics (now) are as follows: if the *śalya* is lodged in the *skin,* the would thereof would have a change of colour from the rest of the skin and the morbid swelling (that ensues) is elongated and spread over; it is also hard. If in the *flesh*, an increase in the morbid swelling and a non-healing of the pathway of the *śalya*, an intolerance to pressure and an appearance of a burning as well as an inflammation there (will arise). If stuck in the *muscle,* the same symptoms appear excluding the swelling and inflammation. If in the vein, a bloating of the vein, a shooting pain in the vein and a morbid swelling of the vein (ensue). If in the *tendon,* a throwing (about) of the tendon - net concerned, a flurry (of distresses) and a violent pain (ensue). If lodged in the channel (*srota*), there will be a destruction of the work concerend of the channel. If in an *artery,* the wind comes out driving the blood noisily; (there will also appear) a body ache, a thirst, as well as a sensation of now sea. If it is in the *bone,* an appearance of various kinds of pain as well as morbid swelling (will come about). If it has entered a *hollow* of the bone, a filling up of that hollow, a pain as if a needle is pricking there, and a strong uneasiness (will take place). If in a *joint,* the symptoms are like those of the bone and there is (also) a cessation of the activity concerned. If in the *viscera*, a gurgling sound, a stretching, and a visibility of urine, stools and food at the orifice of the wound (will come about). If in the *marma,* it will be as if the *marma* is pierced through. In the *śalyas* that have a *subtler course* (of progress inside and when they are themselves subtle), similar characteistics appear but rather indistinctly.

महान्त्यल्पानि वा शुद्ध देहानामनुलोमसन्निविष्टानि रोहन्ति, विशेषतः कण्ठस्रोतः सिरात्वक् पेश्यस्थिविवरेषु, दोषप्रकोप व्यायामाभिघातजीर्णेभ्य प्रचलितानि पुनर्बाधन्ते।

Whether big or minute, the *śalyas* that have entered a healthy body along the direction of the hair heal up well, specially those that have lodged themselves in the passages of the neck, the vein, the skin, the muscle and the hollow of the bone. However, they will cause trouble again (later) when they get moved about because of aggravation of the *dosa*, exercises (taken by the paitent), further injury and indigestion.

तत्र त्वक् प्रनष्टे स्निग्ध स्विन्नायां मृन्माषयवगोधूमगोमय मृदितायां त्वचि यत्र संरंभो वेदाना वा भवति तत्र शल्यं विजानीयात्, स्त्यानधृत मृच्चन्दनकल्कैर्वा प्रदिग्धायां शल्योष्मणा आशु विसरति घृतमुप शुष्यति च आलेपो यत्र तत्र शल्यं विजानीयात्; मांसप्रनष्टे स्नेह स्वेदादिभिः क्रियाविशेषैरविरुद्धैरातुरमुप पादयेत्, कर्शितस्य तु शिथिली

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भूतमनवबद्धं क्षुभ्यमाणं यत्र संरम्भं वेदनां वा जनयति तत्र शल्यं विजानीयात्; कोष्ठास्थिसन्धिपेशीविवरेषु अवस्थितमेवमेव परीक्षेतः सिरा धमनी स्रोतः स्नायुप्रनष्टे खण्डचक्रसंयुक्ते याने व्याधितमारोप्याशु विषमेऽध्वनि यायात्, यत्र संरम्भो वेदना वा भवति तत्र शल्यं विजानीयात्; अस्थिप्रनष्टे स्नेह स्वेदोपपन्नान्यस्थीनि बन्धन पीडनाभ्यां भृशमुपाचरेत्, यत्र सरम्भो वेदना वा भवति तत्र शल्यं विजानीयात, सन्धिप्रनष्टे स्नेह स्वेदोपपन्नान् सन्धीन् प्रसरणाकुंचन बन्धन पीडनै र्भृश मुपाचरेत्, यत्र संरम्भो वेदना वा भवति तत्र शल्यं विजानीयात्, मर्म प्रनष्टे त्वनन्य भावात् मर्मणामुक्तं परीक्षणं भवति।

When a *salya* is hidden in the skin (and not seen easily), rub an oil over it, sudate it well and then soften the region with soft mud, flour of blak gram, barley or wheat *(all of which will give a very kneadable powder that would retain water for a long time)*. Where particularly a flurry of pain ensues know then that, that is the region which harbours the *śalya* (actually). Or where a *kalka* of condensed ghee, wet mud or sandal paste anointed there, melts, quickly and spreads out or dries because of the heat of the *śalya*, know it as the region that harbours the *salya*. When the *salya* has lodged in the flesh, treat the patient by oleation *(snehana)* sudation and such other methods that are (actually) non-contra-indicated (but are helpful and) special measures. In a lean, thin person, where the dislodged *śalya* has started causing agitation and (thus) produces a flurry of pains (in a rather localised region), consider that this is the region of harbouring (of the *salya*). Examine the *śalyas* of the viscera, the bones, the muscle and the (natural) hollows (within the body) in the same manner. When the *śalya* is hidden in a vein, an artery or a channel, or a tendon, seat the patient in a cart with a broken wheel and take him quickly over a rough, uneven road; where exactly a flurry of a pain resuls then, consider that the *śalya* exists there. When the *śalya* is concealed in a bone, treat the patient very much with appropriate oleation (*snehana*) and sudation (*swedana*) measures as well as bandaging and massaging. Where arises a flurry of the pain (during this procedure itself) know that, that is the region of harbour. If (*śalya* is) lost in the joint, nurture the joint with oleation and sudation, stretch, contract, tie, press. where there is a flurry (during this procedure itself) consider *that* as the region of harbour. If in the *marma*, examine the *marma* concerned without any other second consideration (i.e., immediately, for this needs an emergency measure).

सामान्य लक्षणमपि च हस्तिस्कन्धाश्व पृष्ठ पर्वतद्रुमारोहणाधनुर्व्यायामद्रुतयाननियुद्धाध्वगमन लंघन प्लवन प्रतरण व्यायामैर्जृम्भोद्गार कासक्षवथुष्टीवन हसन प्राणायामैर्वात मूत्र पुरीष शुक्रोत्सर्गैर्वा यत्र संरम्भो वेदना वा भवति तत्र शल्यं विजानीयात्। यस्मिन् तोदादयो देशे सुप्तता गुरुताऽपि चाघट्टते बहुशो यत्र शूयते रुज्यतेऽपि च।। आतुरश्चापि यं देशं अभीक्ष्णं परिरक्षति। संवाह्यमानो बहुशस्तत्र शल्यं विनिर्दिशेत्।।

A general characterisation of the hidden *śalya* is as follows: while riding on an elephant or a horse, climbing a mountain, or a tree, stretching a bow, doing an exercise, going fast in a cart, fighting, walking along on the road, jumping across a crevice, crossing a river, jumping up, doing exercises; yawning, belching, coughing, sneezing, vomiting, laughing; doing *prāṇayāma;* or evacuating gas, urine, stools or semen, where there is a flurry or a pain, presume *that* as the region of the harbour.

Whatever is the region of the body where there is a pain and the like, a loss of sensation, heaviness, a discharge when rubbed, or too much of a pain, or the patient himself protects it continuously or presses himself again and again, know *that* as the region of the *śalya*.

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अल्पाबाधं अशूनं च नीरुजं निरुपद्रवम्।
प्रसन्नं मृदुपर्यन्तं निराघट्टमनुन्नतम्।।
एषण्या सर्वतो दृष्ट्वा यथामार्गं चिकित्सकः।
प्रसाराकुंचनान्नूनं निःशल्य मिति निर्दिशेत्।।

Where (and when) the trouble and the distress (of the *śalya* wiithin) have (become) lessened, there will be no swelling, no pain and no trouble of any kind. That (*region which you had suspected to have been lodging a śalya and you have tested accordingly*) which now appears on seeing (again) as graceful and whose rims are soft, not shaking, does not appear elevated, examine such a wound with a probe carefully and well and move that organ up and down and then diagnose it as fully free from any *śalya* (this is how you settle that your surgery is a success). Ss. su. 26. 10-17

g. *The removal of the śalya*

26. शल्यं द्विविधं अवबद्धं अनवबद्धं च।
तत्र समासेन अनवबद्ध शल्योद्धरणार्थं पंचदश हेतून् वक्ष्यामः। तद्यथा-स्वभावः पाचनं भेदनं दारणं पीडनं प्रमार्जनं निर्ध्मापनं वमनं विरेचनं प्रक्षालनं प्रतिमर्शः प्रवाहणम् आचूषणम् अयस्कान्तो हर्षश्चेति।

(From the point of view of their removal aspect), the *śalyas* are of two kinds: the fixed and the loose. We shall enumerate in brief fifteen devices to remove the non fixed *śalyas*. They are 1. natural forces (*svabhava*), 2. dissolution or digestion (*pācana*), 3. breaking (*bhedana*), 4. splitting (*dāraṇa*), 5. pressing (*piḍana*), 6. sprinkling out (*pramārjana*), 7. blowing out (*nirdhmāpana*), 8 emesis (*vamana*), 9. purgation (*virecana*), 10 washing off (*prakṣhālana*), 11, rubbing out (*pratimarśa*), 12 flooding out (*pravāhaṇa*), 13 sucking out (*ācūṣaṇa*), 14. magnet (*ayaskānta*) and 15. delight (*harṣa*). Ss. su. 27. 3, 4.

27. उत्लुण्डितं छित्वा निर्धातयेत् छेदनीयमुखम्। छेदनीयमुखान्यपि कुक्षिवक्षः कक्षावंक्षणपर्शुकान्तर पतितानि च हस्त शक्यं यथामार्गेण हस्तेनैव अपहर्तुं प्रयतेत।
हस्तेनैवापहर्तुमशक्यं विशस्य शस्त्रेण यन्त्रेण अपहरेत्।

For a *śalya* whose end is being seen (i.e., lies exposed), cut it at the base (in the opposite direction of its pointing), shake it hither and thither and then remove. What has got stuck in the viscera, the chest, the axil, the groin and the intercostals, try to remove it as much as possible with your hands, in the direction that is best suited to the case concerend. If this (also) is not possible, cut down what is visible and remove the remaining portion by means of a machine. Ss. su. 27. 8-10.

28. शल्याकृति विशेषांश्च स्थानान्यवेक्ष्य बुद्धिमान्। तथा यन्त्रपृथक्त्वं च सम्यक् शल्यमथाहरेत्।।
कर्णवन्ति तु शल्यानि दुःखाहार्याणि यानि च। आद्रदीत भिषक् तस्मात् तानि युक्त्या समाहितः।।
एतैरुपायैः शल्यं तु नैव निर्यात्यते यदि। मत्या निपुणया वैद्यो यन्त्रयोगैश्च निर्हरेत्।।
शोथपाकौ रुजश्चोग्राः कुर्यात् शल्यमनाहृतम्। वैकल्यं मरणं चापि तस्मात् यत्नात् विनिर्हरेत्।।

The intelligent (surgeon) should observe the specialities of the shapes of the *śalyas* and the places where they have become lodged, take note simultaneously the varied categories of the *yantras* (the machines at his command) and then remove the *salya* properly. The *śalyas* that are awned are removable with difficulty and therefore the surgeon should remove it by skill and with care and all attention. If

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the (various) *śalyas* are not removed employing such devices, the surgeon should endeavour to remove it with his (own) intelligence and skill and a combination of the *yantras* (as needed). Such a intelligent *śalya* that is not extracted will cause morbid swelling, inflammation, violent pain, debility or even death. Therefore, it should be removed out with all effort. Ss. su. 27. 8-10.

(Extensive account and details of treatment to many diseases, specially those that need a surgical intervention are given in SS, particularly in the Divisions of Diagnosis and Treatment. Procedures of operation are also described for such conditions as ascites, obstructed rectum, dead foetus (removal of which without killing the mother was considered to be the most difficult surgical act) etc. We close this chapter however now by just one quotation of historical value and a concluding note).

29. विश्लेषि तायास्त्वथ नासिकाया वक्ष्यामि सन्धानविधिं यथावत्।
नासा प्रमाणं पृथिवी रुहाणां पत्रं गृहीत्वात्ववलम्बि तस्य।।
तेन प्रमाणेन हि गण्डपार्श्वादुत्कृत्य बद्धं त्वथ नासिकाग्रम्।
विलिख्य चाशु प्रतिसंदधीत तत् साधुबन्धैर्भिषगप्रमत्तः।।
सुसंहितं सम्यगतो यथावन्नाडीद्वयेनाभिसमीक्ष्य बद्ध्वा।
प्रोन्नम्य चैनामवचूर्णयेत्तु पतङ्ग यष्टीमधुकांजनैश्च।।

I shall tell you exactly the method of joining of a nose that has been cut off. Take (from) a tree, a leaf of the same size as that of the nose concerned. (Place it on the patient's cheek in such a way that it stays supported - *avalambi* - while you trace ullikhya- the cut portion of the nose precisely on it). Remove (now) a portion of the skin as per this tracing from the cheek (nearby) by slicing (*utkrtya* and) do so in such a way, that a (small) part of it remains (still) attached - *nibāddha* - to the cheek. Place this deflected portion of the skin on the injured nose and then suture it quickly on any pattern that is suitable (*sāadhu*) to the case concered, with all possible care (*apramattah*). Then raise up (the two alae around the nares) by inserting two sticks of castor plant and see that the final form of the nose would thus (i.e., by your raising) look shapely and natural (*samyag*). Then tie and dress by the healing powders of *patanga* and the *anjana* (colyrium) of *yaṣṭī* and *madhuka* Ss. su. 16. 27-29.

(it is the above passage that has stimulated the birth of modern plastic surgery in the 19th century in Europse as Dr. Neurberger records in his History of Medicine. The points to be noted in this context are: (i) This pasage is but a stray passage in SS which caught the imagination of the modern experts to think along similar lines and thus became famous by the work of these experts. it is quite likely that future experts may find many other seminal lines by carefully going through the fuller Text of SS. (ii) Similarly, the plant *sarpagandha or Raulfia serpentina* which has become a famous rediscovered plant is also a very stray plant in SS., There are only three references for it in SS: (a) Ka (i.e. kalpasthana) 5. 84, under plants as a remedy for the poison of rats, where it is one of the many others - e.g., fruits and flowers of *somarāji, kaṭabhi* and *sinduvāraka* - all used for removing poison presumably similarly, (b) Ka. 7. 29, under plants for rat poisons where also it is one of a few others - *trivṛt, āmrata* and *vakra*. (c) Ut. (*uttaratantra*) 60, 47 in mental diseases - to prepare oils and a ghee found efficacious in all cases of mental diseases. Here, it is one among a large list of other plants: *kukkuṭa, kana, vikaṇika, jaṭa, bhūtakeśi,*

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golomi, etc. It will be an interesting speculation whether the screening of these other plants would be showing activities comparable to *Rauwolfia*. The surgical points of interest in this passage are: (i) The geneal simplicity and quickness of the procedure. (ii) Removing of the healthy nearby skin as the grafting tissue, merely deflecting it on to the nose to be repaired so that the tissue rejection is avoided and the healing is also the quickest, because a small portion of this tissue is kept intact with the cheek, from where it is simply sliced off. (iii) Inserting the two sticks of castor plant which itself is known as a wound healer. This will help in uplifting the prepared nose to the required shapeliness and also assist the patient in proper and normal breathing. (iv) The remark in the SS Text immediately next to this passage that cut lips also are to be repaired similarly by slicing a nearby skin; the difference being that the use of the sticks is not necessary here. These are all the points that would urge us to believe that such rudiments of plastic surgery must have been a very often resorted measure of surgical practice in those times.

It should be noted that there is abundant information of surgical natue throughout the whole of Susruta which is mainly surgically oriented. For instance, the diseaes of the eye that he mentions are in the main classified on surgical criteria. As stated earlier some of this information is quite specialised and detailed as in fractures, some, much renowned as in his operations for the ear and nose quoted above and some, curious though much interesting as in his using live ants for suturing.)

(It is undeniable that what Susruta has written surgically was actually practiced then. He was also personally aware of it all and has not written it out of mere fancy as some casual readers may still presume. Otherwise, it is unlikely to get such minute details as the colour of the tissue when it is treated for removal by *kṣāra*; this is said to resemble a ripe jamun fruit, viz., dark bluish black., it is also likely that many areas treated here are of such a practical nature where the special skill of the surgeon was the most deciding factor. This skill would have been a highly individualistic affair whose details however could not have been written down at all. At the most they could have been handed down by personal coaching by the expert to his chosen diciple. Quite likely they would therefore get totally forgotten in course of time. Two such instances that can be quoted are: the surgery for piles by *kṣāra sūtra* and the preparations of the diverse types of *kṣāras*, specially the judgements that would decide the degree of maturation that the *kṣāra* would have attained, while it was being prepared).

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16 Society and Medicine

a. *dharma and the society*

1. "Indian concept of *Dharma* was far reaching and embraced the whole life of man. The organisation of the society and the individual within it, with its concept of *cāturvarṇya* (based on the qualities and types of employment गुण कर्म विभागशः rather than birth and insistence on acual conduct rather than anything else, आचारो धर्मः) and the four progressive stages of life or the *āśramas* (celibate, household, retirement and renunciation) was meant to ensure the ideal of life as envisaged by the sages: *ātmadarśana,* seeing the Self within and *bṛhma sākṣathkāra,* the direct perception of the God-head.

The writers on *dharmaśastras* (treatises on *dharma*) meant by *dharma* not a creed or a religion but a mode of life or a code of conduct which regulated a man's work and activities as a member of society and as an individual and was intended to bring about the gradual development of a man and enable him to reach what was deemed to be the goal of human existence." PVK. v2. P1. P2.

2. वेदोक्तः परमो धर्मः। स्मृति शास्त्रगतोऽपरः। शिष्टाचीर्णः परः प्रोक्तस्त्रयो धर्माः सनातनाः।

The supreme *dharma* as spoken in the *vedas,* then, the *dharma* as written down in the classics of the *smṛtis* (by specific sages, out of their recollections) and then after, the *dharma* as practised by the espected in society - these three are the eternal *dharmas,* spoken about. Anuśāsana parva. 141.65

अत्र च धर्म शब्दः षड्विधः स्मार्त धर्मविषयः। तद्यथा-वर्णधर्म आश्रमधर्म वर्णाश्रम धर्म गुण धर्मो निमित्त धर्मः साधारण धर्मश्चेति।।

Here, the term *dharma* conveys six subject-matters or topics as prescribed by traditional law or usage, such as, the *dharma* of the castes, the *dharmas* of the stages in life or *āśramas,* the *dharmas* as pertaining to a paticular caste and a particular stage of life, *dharmas* of the qualities (of the persons concened) the *dharmas* of the expiatory steps and *dharmas* that are common to all humanity. Mitaksara.

उपदिष्टो धर्मः प्रतिवेदम्। स्मार्तो द्वितीयः। तृतीयः शिष्टागमः।

Dharma is taught in every one of the *vedas.* That which (is taught in) *Smṛtis* is the second (category of *dharmas).* What is handed down as tradition by the cultured and the respected is the third (category). Bau. dh. su. 1. 1.1-4.

b. *truth and dharma*

3. सुविज्ञानं चिकितुषे जनाय सच्चासच्च वचसी प्रस्पधंति।
तयोः यत्सत्यं यतरदृजीयः तदित्समोऽवति हन्यसत्।

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(concept of truth, as old as vedas) "True speech and false speech run a race against each other. Soma protects out of the two, what is very straight forward and strikes down what is false." (PVK) Rg. vii. 10412.

तस्मात् सत्यं वदन्तम् आहुः धर्मं वदत इति धर्मं वा वदन्तं सत्यं वदति इति एतद् हि एव एतदुभयं भवति।

"Therefore, one who tells truth is spoken to be as telling *dharma*; and (similarly) one who tells *dharma* is spoken to be as telling truth. This way they both become either of the two." (PVK) Br. up. 1.4.14.

तदेतानि जपेत् असतो मा सग्दमय तमसोमा ज्योतिर्गमय मृत्योर्माऽमृतं गमय इति।

Therefore the following should be repeatedly uttered "From untruth, lead me to truth, from darkness, lead me to light, from death lead me to immortality". Br. U.I. 3. 28.

4. धर्मो विश्वस्य जगतः प्रतिष्ठा। लोके धर्मिष्ठं प्रजा उपसर्पन्ति। धर्मेण पापमपनुदति धर्मे सर्वं प्रतिष्ठितं तस्मात् धर्मं परमं वदन्ति।

Dharma is the prop of the universe and the world. In this world, people seek forth and approach a man of *dharma*. One gets rid of the sins by *dharma* and everything is established in *dharma*. it is therefore, they say that *dharma* is great. Taittiriya āraṇyaka. 10. 63.

धारणात् धर्म इत्याहुः धर्मो धारयते प्रजाः।

Dharma is so called because of its character as the sustainer of all beings. PVK 1627.

धर्म एव हतो हन्ति धर्मो रक्षति रक्षितः। तस्मात् धर्मो न हन्तव्यो मा नो धर्मो हतोऽवधीत्।

Dharma when violated kills the violator, when preserved it preserves man; therefore, *Dharma* should not be violated lest Dharma might destroy us. (PVK)1627.

ऊर्ध्वं बाहुर्विरौमि एष न कश्चित् श्रुणोति माम्। धर्मात् अर्थश्च कामश्च स किमर्थं न सेव्यते।।
न जातु कामात् न भयान्न लोभात् धर्मं जह्यात् जीवितस्यापि हेतोः।
नित्यो धर्मः सुख दुःखे तु अनित्ये जीवो नित्यः हेतुरस्य तु अनित्यः।।

With arms up-raised I here by raise a loud cry. But no one listens to me: from *Dharma* spring wealth and (satisfaction of) all desires. (Still) Why is *Dharma* not resorted to? One should not give up *Dharma* for some desired object, nor through fear nor from greed nor even for the sake of life itself. (For), *Dharma* is eternal, pleasure and pain are impermanent; the individual self is eternal, but the conditions (under which the self works) are impermanent. Mahābhārata. Svargārohanaparva 5. 63, 63.

धर्मश्च अर्थश्च कामश्च त्रितयं जीविते फलम्। एतत् त्रयं अवाप्तव्यं अधर्मपरिवर्जितम्।।

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Dharma,. *Artha* and *Kāma* are the three prizes (fruits) of life. (Therefore,) these three should be striven for in such a way as not to conflict with *Dharma* Anuśāsanaparva 3. 18.19

5. अचिन्त्याः खलु ये भावा न तान् तर्केण योजयेत्। प्रकृतिभ्यः परं यच्च तदचिन्त्यस्य लक्षणम्।।

One should not try to solve incomprehensible matters by ratiocination; what is beyond nature, that is the characteristic of the unthinkable. Bhiśma parva 5. 12.

अथातो धर्मं व्याख्यास्यामः। यतोऽभ्युदयनिश्रेयससिद्धिः स धर्मः। द्रव्यगुणकर्म सामान्य विशेष समवायानां पदार्थानां साधर्मवैधर्म्याभ्यां तत्वज्ञानं निःश्रेयसहेतुः।

We shall hence forth comment upon *dharma*. From which there would be an upliftment and a securing of the ladder for liberation, that is *dharma*. The understanding of the principle of the (multifarious) activities, generalities, specialities and coinherent (properties) in terms of their true as well as distorted nature, – (this) is the cause of the (securement of the) ladder (for upward progress). Vaisesika sutra. 1.1.2.

प्रमाण प्रमेय संशय प्रयोजन दृष्ठान्त अवयव तर्क निर्णय वादज्ञानं हेत्वाभास छल जाति निग्रहस्थानानां तत्वज्ञानात् निःश्रेयससिद्धिः।

One secures the ladder (for progress and final liberation) by understanding the principle of the proof, the provable, the doubt, the utility, the illustration, the final conclusion and the theory, the limbs (thereof), the logic (underlying), the tentative) conclusion (on the way), the knowledge of argumentation, the (purposefully) contradictory argument (that one can make), the fallacious logic, the obstinacy, the kind and the place or point of destruction (of the opponent). Nyayasutra.

(These two statements illustrate how the concept of *dharma* in its need as well as nature, was a body of thinking attainable at the end of a severely logical examination and not just an act of faith).

प्रत्यक्षानुमानं च शास्त्रं च विविधागमस्त्रयं सुविदितं कार्यं धर्मशुद्धिमभीप्सता। आर्षं धर्मोपदेशं च वेद शास्त्राविरोधिना। यस्तर्केण अनुसन्धत्ते स धर्मं वेद नेतरः।

For one who desires to know the purity of *dharma* three are the well known acts (he is enjoined to perform viz., take recourse to :) direct perception, inferential deduction and the various traditional texts. The ancient teachings of *dharma* and that which is not contradictory to the *vedas* and the *śāstras* and (in addition) is congenial to logical argumentation (as well), know *that* and nothing else as to be the *dharma*. Manu XII. 105.

c. (*dharma and ethics*)

6. तस्मात् एतत् त्रयं शिक्षेत्-दमं दानं दयामिति।

Therefore one should teach the following three: self restraint, charity and compassion. Br. u. 2.3.

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अद्रोहः सर्वभूतेषु कर्मणा मनसा गिरा। अनुग्रहश्च दानं च सतां धर्म सनातनः।

Non-injury to all beings in thought, word and deed, good will and charity are the eternal *dharma* of the good. MB shantiparva. 162. 21.

अथ अष्टौ आत्मगुणाः। दया सर्वभूतेषु क्षान्तिः अनसूया शौचम् अनायासमंगलम् अकार्पण्यं अस्पृह इति।

Eight are the qualities of the self: compassion to all beings, forbearance, freedom from envy, purity (of body, speech and thought), absence of fatiguesome efforts, doing what is commendable, not demeaning oneself before others, not hankering after sensual pleasures or the possession of others. Gautama dharma sūtra viii. 23-24.

आचार हीनं न पुनन्ति वेदाः।

(Even) the *vedas* will not purify a person deficient in conduct. Vasistha. vi. 3.

धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रिय निग्रहः। धीर्विद्या सत्यमक्रोधः दशकं धर्मलक्षणम्।।

Fortitude, clemency, restraint, non-stealing, cleanliness, control of the sense, intellect, learning, truth and non-anger - these contitute the ten characteristics of *Dharma*.

अनित्यानि शरीराणि विभवो नैव शाश्वतः। नित्यं सन्निहितौ मृत्युः कर्तव्यो धर्म संग्रहः।।

"Our bodies are not permanent, our prosperity is fleeting, death is always near to us. Therefore one should take to *Dharma*". SR. Bs. 158.

द्वे पदे बन्धमोक्षाभ्यां निर्ममेति ममेति च। ममेति बध्यते जन्तुः निर्ममेति विमुच्यते।।

"Two words make for bondage and release: freedom from mineness and mineness. The sense of mineness binds the creatures; freedom from mineness produces release". Paingala u. iv. 20 (SR. Bs. 158)

यावत् भ्रियेत जठरम् तावत् स्वत्वं हि देहिनाम्। अधिकं योभिमन्येत स स्तेनो दण्डमर्हति।।

"Living beings have a right only upto what is necessaruy for satisfying hunger; he who thinks of acquiring more is a thief and deserves punishment". Bhagavata (SR. Bs. 160.)

स्वाधीनम् समतिक्रम्य मातरम् पितरम् गुरुम्। अस्वाधीनं कथं दैवं प्रकारैरभिराध्यते।।

"How shall we seek to please the Divine, who is not within our reach when we neglect father, mother and teacher who are with us." Ramāyaṇa (SR. Bs. 160)

दानं प्रियवाक् सहितं, ज्ञानं अगर्वं, क्षमान्वितं शौर्यम्, वित्तं त्यागसमेतम्, दुर्लभं एतत् चतुर्भद्रम्।

"Charity with kind words, knowledge without pride, courage with forbearance and wealth with renunciation, these four are difficult to attain but they make for man's progress". (Sr. Bs. 160-161.)

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7. पूर्णो दृष्टि अवष्टभ्य ध्येय त्याग विलासिनीम्। जीवन्मुक्ततया स्वस्थो लोके विहर राघव।।
अन्तः सन्त्यक्त सर्वशो वीतरागो विवासनः। बहिः सर्व समाचारो लोके विहर राघव।।
बहिः कृत्रिम सम्रम्भो हृदि सम्रम्भ वर्जितः कर्ता बहिः अकर्तान्तः लोके विहर राघव।।
त्यक्ताहंकृतिः आसुप्तमतिराकाश शोभनः। अगृहीत कलंकान्तो लोके विहर राघव।।
उदार पेशलाचारः सर्वाचारानुवृत्तिमान्। अन्तः सर्व परित्यागी लोके विहर राघव।।
अन्तर् नैराश्यमादाय बहिः आशोन्मुखे हितः। बहिस्तप्तो अन्तराशीतो लोके विहर राघव।।

"(Yogavasista tells us how a liberated soul should act in the world:) Steady in the state of fulness which shines when all desires are given up and peaceful in the state of freedom in life, behave in this world, O Raghava. Inwardly free from all desire, but outwardly active in all affairs, behave in this world, O Raghava. Free from egoism, with mind detached as in sleep, pure like the sky, ever untainted, behave in this world, O Raghava. Conduct yourself nobly but with tenderness, conforming to the forms of society but inwardly renouncing all, behave in this world, O Raghava. Unattached at heart, but outwardly acting as if with attachment, inwardly cool but outwardly fervent, behave in this world, O Raghava." Yogavasistha (SR. Bs. 217).

अध्यापनं बृह्मयज्ञः पितुर्यज्ञस्तु तर्पणं होमो दैवो बलि र्भूतो नृयज्ञो अतिथिपूजनम्।

"Learning is *brahma yajna*, service of elders is *pitṛ-yajna*, honouring great and learned people is *deva-yajna*, performing religious acts and charity is *bhūta-yajna* and entertaining guests is *narayajna*" Manu (SR. u 50)

8. वेद शास्त्राविरोधी यस्तर्कः चक्षुरपश्यताम्।

"For those who cannot see, the reason which is not in contradiction with *vedas* and scriptures is the eye'. Vākyapādiya (SR. u. 104)

आचार हींन न पुनन्ति वेदाः।

The vedas do not purify the ethically unworthy. Vasiṣṭha Dharma Sastra vi. 3.

त्यक्तव्यो ममकारः त्यक्तुं यदि शक्यते नासौ।
कर्तव्यो ममकारः किन्तु सर्वत्र कर्तव्यः।।

"One should give up attachment but if one is not capable of it., let him cultivate attachment; only it should be attachment to all". (SR. u. 106)

क्रोधं शमेन जयति कामं संकल्पवर्जनात्। सत्वसंशोधनात् धीरो निदां उच्छेत्तुम् अर्हति।।
धृत्या शिश्नोदरं रक्षेत् पाणिपादं च चक्षुषा। चक्षुस् श्रोत्र च मनसा मनो वाचं च कर्मणा।।
अप्रमादात् भयं जह्यात् दम्भं प्राज्ञोपसेवनात्।।

"The wise man overcomes anger through mind-control, lust through renunciation of desire. He can attain mastery ovr sleep by developing the quality of *sattva*. Through steadfastness he should protect the organ of generation and the stomach. With (the help of) the eyes he should protect the hands and the feet. Through (the power of) mind, he should protect the eyes and the ears and through conduct he

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should protect mind and speech. Through constant vigilance he should shed fear and through service of the wise, he should overcome pride". Brahma purana. 235. 40. 42 (SR. u. 109)

दया समं नास्ति पुण्यं पापम् हिंसा समं न हि।

"There is no virtue like compassion and no vice like the use of violence". Devi Bhagavatam (SR. u. iii)

9. भोक्ता च धर्माविरुद्धान् भोगान्। एवमुभौ लोकावभिजयति।

A person who enjoys such pleasures as are not opposed to *dharma*, thus conquers both the worlds. Apastambha Dharma sutra. 8. 20, 22-23.

10. धर्माविरुद्धेन कामम् सेवेत। न निःसुखं स्यात्...
अर्थ एव प्रधान इति कौटिल्यः। अर्थे मूलौ धर्मकामाविति।

One should enjoy the sensuous pleasures in a way not opposed to *dharma*. One should not live with no happiness (whatsoever).... Material wealth alone is primordial - thus says Kautilya. (For), both *dharma* and *kāma* have their source in *artha*. Artha sastra. 1.7.

11. अलौकिकत्वात् अदृष्टार्थत्वात् अप्रवृत्तानां यज्ञादीनां शास्त्रात् प्रवर्तनम्... विद्या भूमि हिरण्य पशु धान्य भाण्डोपस्कर मित्रादीनामार्जनम् आर्जितस्य विवर्धनम् अर्थः। श्रोतृत्वक् चक्षुर्जिह्वा आघ्राणानाम् आत्म संयुक्तेन मनसाधिष्टितानां स्वेषु स्वेषु विषयेषु अनुकूल्यतः प्रवृत्तिः कामः। तेषां समवाये पूर्वः पूर्वो गरीयान्।

Dharma is engaging oneself in acts of sacrifices as enjoined by the sacred Texts though they are unworldly and the principle of their meaning is not (easily) visible. ....Economic interest is the securement of learning, land, gold, animals, grains, wherewithals, friends and the like as well as the (further) development of what has been earned. Sensual pleasure is engaging the ear, the skin, the eye, the tongue and the nose with the overlordship of the mind and in a coupling with the self in objects that are condusive to every one of them respectively. Among this entire cluster, each preceding one is superior to each following one. Kamasutra I. 2. 7.-15.

12. अहिंसा सत्यमस्तेयं शौचम् इन्द्रिय निग्रहः। एतं सामासिकं धर्म चातुर्वण्येऽब्रवीन् मनुः।।

Non-violence, truth, non-stealing, cleanliness, restraint of the senses - Manu said that these are the *dharmas* common to all the four castes. Manu. x. 63.

अक्रोधः सत्यवचनम् संविभागः क्षमा तथा। प्रजनः स्वेशु दारेषु शौचम् अद्रोह एव च।।
आर्जवम् भृत्य भरणम् नव्येते सार्व वर्णिकाः।

Freedom from anger, truthful words, sharing one's wealth with others, forbearance, begetting offsprings in one's own wife, purity, absence of enmity, uprightness, maintaining persons dependent on oneself - these (duties) are common to (persons of) all castes. MB shantiparva 60. 7-8.

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13. अद्रोहः सर्वभूतेषु कर्मणा मनसा गिरा। अनुग्रहश्च दानम् च सतां धर्मः सनातनः।।

Non-hatred in deed, mind and speech towards all beings, doing favour and giving gifts - this is the eternal *dharma* of the gentle. Shantiparva. 162. 21.

14. अथ अष्टौ आत्मगुणाः। दया सर्व भूतेषु क्षान्तिः अनसूया शौचम् अनायास मंगलम् अकार्पण्यम् अस्पृह इति।

Now, about the eight qualities of (one who has realised) the soul: these are: compassion for all beings, forbearance, freedom from envy, purity (of body, speech and thought), absence of painful efforts and ambitions, auspiciousness (in all his dealings), not demeaning oneself before others, and non-hankering (after others' possessions). Gau. dh. su. viii. 23. 24.,

15. यथैव आत्मा परः तद्वत् द्रव्ष्टव्यः सुखमिच्छता। सुखदुःखानि तुल्यानि यथात्मनि तथा परे।।

One who desires happiness should consider others exactly as oneself. Happiness and unhappiness are similar as between oneself and the others. Daksa iii.22.

16. श्रूयताम् धर्म सर्वस्वं श्रुत्वा चैव अवधार्यताम्। आत्मनः प्रतिकूलानि परेषां न समाचरेत्।।

Let all listen to (this) that constitutes the whole of *dharma* and having listened, let all bear (it) in mind fully. What is harmful to oneself should never be practised on some one else. Devala.

d. *the goals of personal endeavour*

17. त्रिवर्ग युक्तः प्राज्ञानामारम्भो भरतर्षभ। धर्मार्थौ अनुरुध्यन्ते त्रिवर्गासंभवे नराः।।
पृथकत्वनिष्ठानां धर्मं धीरोनुरुध्यते। मध्यमोर्थं कलिं बालः काममेव अनुरुध्यते।।
कामार्थौ लिप्यमानस्तु धर्ममेव आदितश्चरेत्। न हि धर्मादप्यैत्यर्थः कामो वापि कदाचन। उपायम् धर्ममेवाहुः त्रिवर्गस्य विशांपते।

"Therefore our Texts lay down two seats of authority in morals, viz., the revealed truth *sruti* that all this is brahma and the inner light or conscience. Another reason for cultivating high moral qualities is found in the doctrine of the goals or ends of human existence, *purusartha*. From very ancient times these are said to be four: *dharma* (right conduct), *artha* (economic interest), *kāma* (satisfaction of sexual, emotional an artistic life), *mokṣa* (liberation of the spirit). The last is supreme but to be attained only by the few, the vast majority can only place it as an ideal to be attained in the most distant future. As regards the other three, there is a gradation of values: *kama* is the lowest of all and only fools regard it as the only end. A wise man tries to secure all three, but if all three cannot be obtained, he secures *dharma* and *artha* or only *dharma* if he has a choice of only one among the three. A man of middling discipline perfers *artha* to the other two; *dharma* is the source of both *artha* and *kāma*." P.V. Kane k. 8.

18. इह खलु पुरूषेण अनुपहत सत्त्व बुद्धि पौरुष पराक्रमेण हितमित च अमुष्मि श्च लोके समनुपश्यता तिस्त्र एषणाः पर्येषृव्या भवन्ति। तद्यथा प्राणैषणा धनैषणा परलोकैषणा इति

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Here indeed, for a person unimpaired in his mental vigour, intellect, manliness and sense of valour and (for him, who) can (probably therefore only) perceive well what is salutary (to himself) here as well as in the next world, three pursuits need to be sought after; as for instance, the pursuit of life, the pursuit of money and the pursuit of the other world.

आसां तु खलु एषणानां प्राणैषणां तावत्पूर्वतरमापद्येत। कस्मात्। प्राण परित्यागे हि सर्वत्यागः।
तस्यानु पालनं-स्वस्थस्य स्वस्थवृत्तानुवृत्तिः आतुरस्य विकारप्रशमनेऽप्रमादः।

Amongst these pursuits indeed, one should first secure the pursuit of life. Why? Abandonment of life is the abandonment of every thing. Its preservation is: for the healthy, to continue to follow the rules condusive to the state of health; for the patient, non-negligence in palliating the aberration.

अथ द्वितीयं धनैषणामापद्येतः प्राणेभ्यो हि अनन्तरं धनमेव पर्येष्टव्यं भवति, न हि अतः पापात् पापीयोऽस्ति यदनुपकरणस्य दीर्घमायुः तस्मादुपकरणानि पर्येष्टुं यतेत।

Then one should secure the second pursuit of wealth. After life, wealth only is to be sought after. There is nothing more miserable in this world than (that of) the sin by which one has a long span of life without any wherewithal to live by. Therefore one should try to seek after these wherewithals.

अथ तृतीयां परलोकैषणामापद्येत। संशयश्च अत्र, कथं भविष्याम इतश्च्युता नवेतिः कुतः पुनः संशय इति, उच्यते-सन्ति ह्येके प्रत्यक्षपराः परोक्षत्वात् पुनर्भवस्य नास्तिक्यमाश्रिताः, सन्ति चागम प्रत्ययादेव पुनर्भवमिच्छन्ति, श्रुति भेदाच्च - "मातरं पितरं चैके मन्यन्ते जन्मकारणम्। स्वभावं परनिर्माणं यदृच्छां चापरे जनाः" इति। अतः संशयः - किं नु खलु अस्ति पुनर्भवो न वा इति।

Then one should secure the third pursuit of the other world. There does occur a doubt here, however. How? Whether we will continue to exist in the future after getting displaced from this present life, or, not? Why does this doubt arise? We shall answer this (as follows). There are some (in this world) who believe only what they can themselves observe directly and as such they take resort to a state of belief in non-existence of rebirth by the very proof of the *vedas*. But there also occurs a diversity in the vedic words as well: "Some consider mother and father to be the reason for one's birth. While others presume just nature or an evolutive shapening or a mere chance as the reason here". That is why there occurs a doubt - as to whether there *is* rebirth or not. Cs. su. 11.3-6.

(Then follows alogical proving for the existence of rebirth with a refutation of the atheistic standpoint as the conclusion, as below:)

न परीक्षा न परीक्ष्यं न कर्ता कारणं न च। न देवा नर्षयः सिद्धाः कर्म कर्मफलं न च।।
नास्ति कस्यास्ति नैवात्मा यदृच्छोपहतात्मनः। पातकेभ्यः परं चैतत् पातकं नास्तिकग्रहः।।

For those (atheists) who are struck with the (faith) in just accidents (everywhere), there is no (value or need for) examination and scrutiny, or anything scrutinisable, or an agent or a cause, neither there are gods, nor the sages or the realised souls or the *karma* (the action that a person carries out in life) or the fruit of *karma*. There is no sin more sinful than this prejudice of atheism. Cs. 11. 14, 15.

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e. *statecraft and dharma*

19. आयुक्तेभ्यः चोरेभ्यः परेभ्यो राजवल्लभात्। पृथिवीपति लोभात् च प्रजानां पंचधा भयम्।। पंच प्रकारमपि एतदपोह्यं नृपतेर्भयम्।

From the appointed officers (of the king or the state), from thieves, from the alien (agencies), from those who are beloved of the king and from the greed of the king (himself) - fear to the citizens (of a country) are thus five fold. This fear of the five types should be removed by the king. Kamandaka V. 82-83.

20. बालवृद्ध व्याधित व्यसनि अनाथांश्च राजा बिभृयात्। स्त्रियं अप्रजातां प्रजातायाश्च पुत्रान्।।

The king should sustain the infantile, the old, the diseased, the addicts, the orphans and the women who have no issues. Kautilya. 11.1.

कच्चित् अन्धांश्च मूकांश्च पङ्गून् व्यङ्गान् अबान्धवान्। पितेव पासि धर्मज्ञ तथा प्रव्रजितानपि।।

Do you protect the blind, the dumb, the lame, the disabled and those who have no relatives as well as those who have been abandoned (by all) just as if you are their father, O knower of *dharma*? Sabhaparva. 5. 124.

कृपण आतुर अनाथ व्यङ्ग विधवा बाल वृद्धान् औषधावसथ अशनाच्छादनैः बिभृयात्।

The miserly, the diseased, the orphaned, the disabled, the widows, the infantile and the aged should be maintained (by the state) with medicines, shelter, food and clothing. Sankhalikhita. p. 138.

21. "In many modern countries the State has become the means of providing services for the greater part of its subjects, not only armed forces and the police but social services such as education, public health, medical attendance, insurance against unemployment, old age, widowhood, orphanage, relief of poverty, etc. In ancient India though there were naturually no acts of parliament, guarnteeing the above, public opinion, the views of eminent writers and the practices of the best kings created an atmosphere - in which it was thought that it was imperative for the king representing the State and its resources to encourage learning, to care for the blind, the decrepit, the old and the widwoed and to give employment to those who were unemployed. Asoka constructed hospitals for men and animals (2nd Rock Edict at Kalsi in (1.1 Vol. '11. p. 28), alms-house, rest houses, watering places, shady trees on the highways and irrigation works; (he himself) vistied and supported the aged (8th Girnar Rock Edict in C. i. 1. p. 15)" PVK.

22. प्रजासुखे सुखम् राज्ञः प्रजानाम् च हिते हितम्। नात्मप्रियं हितं राज्ञः प्रजानां तु प्रियं हितम्।।

In the happiness of the subjects lies the happiness of the king, in their welfare lies his welfare; the good of the king does not consist in what is pleasing to himself; but what is pleasing to the subejcts constitutes his good. Arthasastra.

यथा हि गर्भिणी हित्वा स्वं प्रियं मनसोऽनुगम्। गर्भस्य हितमाधत्ते तथा राज्ञापि असंशयम्।

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A king, like a pregnant woman should not do what is pleasing to himself, but what would be condusive to the good of the people. Shantiparva. 56. 44.

23. स नैव व्यभवत् तत् श्रेयो रूपमत्यसृजत धर्म तदेतत् क्षत्रस्य क्षत्रं यत् धर्मः तस्मात् धर्मात् परं नास्ति। अथो अबलीयान् बलीयान् समाशंसते धर्मेण यथा राज्ञा। एवम् यो वै स धर्मः सत्यं वै तत् तस्मात् सत्यं वदन्तंम् आहुः धर्मं वदतीति धर्मं वा वदन्तम् सत्यं वदतीति एतत् हि एव एतदुभयम् भवति।

"He (creator) then created the most excellent *Dharma* which is the might of the mighty (i.e. more powerful than the warrior caste). There is nothing higher than *dharma*. Even a weak man hopes to prevail over a very strong man on the strength of dharma, just as he prevails over a wrong-doer with the help of the king. So what is called *dharma* is really truth. Therefore people say about a man who declares the truth that he is declaring *dharma* and about one who declares what *dharma* is they say that he speaks the truth. These two (*dharma* and truth) are thus one (*and the same*)" Br. u. 1.4.14. (PVK Vol. iii. 97)

24. एवम् धर्मान् राज धर्मेषु सर्वान् सर्वावस्थम् सम्प्रलीनान्निबोध....सर्वा विद्या राजधर्मेषु युक्ताः सर्वे लोका राजधर्मे प्रविष्ठाः। सर्वे धर्म प्रधानाः।

राजमूला महाभाग योग क्षेम सुवृष्टयः। प्रजासु व्याधयश्चैव मरणम् च भयानि च।

"Know that all *dharmas* are merged in *rajadharma* that *raja-dharmas* are at the head of all *dharmas*" and "the welfare, good rains, sickness, calamities and death among people owe their origin to the king" (PVK).

"It was the king's duty to see that the people in his kingdom acted according to the rules laid down in the *smritis* for the several *varnas* and *āśramas*, to administer justice and to interfere when his help is sought by a *parisad* (assembly of learned men). Therefore it may be said with truth that *rājadharma* was the highest goal of all the world., that it comprehended within itself all rules of *ācāra, vyavahāra* (administration of justice) and *prāyascitta* (penetentiary injunctions). It is on account of this all pervading influence of Government or royal power that the mahābhārata frequently emphasises that the king is the maker of the age, that it is he who can usher a golden age or an age of strife and misery" (PVK)

25. सम्स्थाया धर्म शास्त्रेण शास्त्रम् वा व्यावहारिकम्। यस्मिन्नर्थे विरुध्येत धर्मेणार्थं विनिश्चयेत्।। शास्त्रं विप्रतिपद्येत धर्मन्यायेन केनचित्।

"In any matter where there is a conflict between *dharmasastra* and practices or between *dharma śastra* and any seclar transaction, the king should decide that matter by relying on *dharma*. If *śastra* comes in conflict with any rational and equitable rules then the latter shall be the deciding factor and the (strict) letter of the text will be nowhere" (Col. III 8 PVK) Kautilya III.1.

26. दण्डेन नीयते चेदं दण्डं नयति वा पुनः। दण्डनीतिरिति ख्याता त्रीन् लोकान् अभिवर्तते।

This science of administration leads forth this (state) and again it (always) carries (the threat of) punishement. (That is why) this is called the science of administration and this reigns (over) the (whole of the) three worlds. Śantiparva. 59. 78

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दण्ड नीतिः स्वधर्मेभ्यः चातुर्वर्ण्यम् नियच्छति प्रयुक्ता स्वामिना सम्यग् अधर्मेभ्यो नियच्छति।

The ethics of administration regulates the (institution of) the four castes by (following its own) *dharma* (or rules); (and,) when employed properly by the master (viz. the king or the state) controls (one) from commuting *adharma* Śantiparava. 69. 76.

27. कालो वा कारणं राज्ञो राजा वा कालकारणम्। इति ते संशयो मा भूत् राजा कालस्य कारणम्।

There need be no doubt as to whether it is the times that is responsible or the cause to the king (who reigns then) or is it the king who is the cause of the times (in which he regins). It is the king who is the cause of (his) times. MB udyoga parva. 132.16.

युग प्रवर्तको राजा धर्मा धर्मं प्रशिक्षणात्। युगानां च प्रजानां च दोषः किंतु नृपस्य तु।।

King is the originator and the arbiter of the age, since, it is he who administers what is *dharma* and what is not. The blemishes of the times and of the public is (consequently) ensuing from the king (and neither, of the times or the public). Śukranītisāra IV. 1-60.

28. अन्वीक्षकी त्रयी वार्तानां योग क्षेमसाधनो दण्डः। तस्य नीतिः दण्ड नीतिः। अलब्धलाभार्थं लब्धपरिरक्षिणी रक्षितविवर्धनी वृद्धस्य तीर्थेषु प्रतिपादिनी च।

Administration is the means of securing rationalistic sciences, the three *vedas*, the business of life and the welfare in general. Its ethics is the ethics of administration. This also serves for securing what has not yet been secured, to guard and maintain what has been secured, to promote what has been kept protected and to keep established the aged and the elderly in (the paths of) holiness. Arthaśāstra. 1.4.

धर्म शब्दः कर्तव्यता वचन इत्युक्तम्।... कर्तव्यं च दृष्टार्थं षाड्गुण्यादि। अदृष्टार्थं अग्निहोत्रादि। तत्रेह प्राधान्येन दृष्टार्थं उपदिश्यते। तत्रैव राज धर्म प्रसिद्धिः।

The term of *dharma* is meant to convey a sense of what ought to be done or duty (of the king).... Duties (are two fold:) that whose meaning or implication is explicit, such as the employment of the six measures (of the king viz. *sandhi* - compromise, or peace, *vigraha* - war, *yāna*-marching, *āsana* - sitting encamped, *dvaidhī bhāva* - dividing his forces and *samśraya* - seeking the protection of a more powerful king) or that whose significance is invisible such as that of oblation to fire and the like. It is here that the *dharma* of the statecraft is (residing). Madātithi on Manu VII. I.

यैर्येरुपायैः लोकस्तु न चलेदार्यवर्त्मनः। तत्सर्वं राजशार्दूल नीति शास्त्राभिवर्णितम्।।

By whatever strategies because of which the world does not go astray from the path of the venerable, the whole of it, O the lion among the kings, is described in detail in the Technical Treatises on Ethics. Śāntiparva. 59, 74.

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f. *(work ethics)*

29. यो यस्मिन् कर्मणि कुशलः तं तस्मिन्नेव योजयेत्। दुःसाधमपि सुसाधं करोति उपायज्ञः। अज्ञानिना कृतमपि न बहु मन्तव्यम्। यादृच्छिकत्वात् कृमिरपि रुपान्तराणि करोति। सिद्धस्यैव कार्यस्य प्रकाशनं कर्तव्यम्।

In which task a particular person is an expert, he should be employed only in such a task. A person who grasps the strategems (needed to be adopted in a particular task) makes even a difficult task easy. One should not make much of an ignorant (person) even if he carrys out a task (without the knowledge needed). (For,) even a caterpillar undergoes a transformation by sheer coincidence. One should make public only a task that is fully accomplished. Ca. su. 117. 121.

30. ज्ञानवतामपि दैवमानुषदोषात् कार्याणि दुष्यन्ति। दैवं शान्तिकर्मणा प्रतिषेद्धव्यम्। मानुषीं कार्यविपत्तिं कौशलेनैव विनिवारयेत्। कार्यविपत्तौ दोषान् वर्णयन्ति बालिशाः।

Even for the knowledgeable, the tasks get vitiated by the blemishes of fate or the gods, or the human nature. The vitiation due to the gods should be guarded against by the proprietory rites that are needed. The impediment due to human nature should be warded of (by employing) the skill (needed for the occasion). It is only a childish person who goes on decribing the impediments that he has to face (and not take steps as mentioned above to remove them out). 122-125.

31. कार्यार्थिना दाक्षिण्यं न कर्तव्यम्। क्षीरार्थी वत्सोमातुरूधः प्रतिहन्ति। अप्रयत्नात् कार्य विपत्तिभवित्। न दैव प्रमाणानां कार्य सिद्धिः। कार्यबाह्यो न पोषयत्याश्रितान्। यः कार्यं न पश्यति सोऽन्धः। प्रत्यक्षपरोक्षानुमानैः कार्याणि परीक्षेत। अपरीक्ष्यकारिणं श्रीः परित्यजति। परीक्ष्य तार्या विपत्तिः। स्वशक्तिं ज्ञात्वा कार्यमारभेत। स्वजनं तर्पयित्वा यः शेष भोजी सोऽमृत भोजी। सर्वानुष्ठानादायमुखानि वर्धन्ते।

One intent on carrying out a work should not indulge in officiousness. The calf intent on securing milk hurts (its own) mother's udder. By taking no effort, there will occur a failure in the task. There is no accomplishment of the task for one who makes the gods (alone) responsible. One who is far away from work cannot protect his (own) dependents. He who canot see the task (he has to take up for the occasion concerned) *he* is a blind person. Tasks should be examined by means of direct examination, indirect examination and inferential deduction. Prosperity abandons one who works without prior examination. Calamity should be crossed over by (such) prior examination. One should commence a task after assessing one's own abilities. One who consumes what is left after satisfying his own people, he consumes the very nectar. The doors of profit flourish by practising all kinds of undertakings.

32. नास्ति भीरोः कार्य चिन्ता।

There is no question of taking up any tasks for a person who is timid. Ca. su. 126-138.

33. मित भोजनम् स्वास्थ्यम्। पथ्यमपथ्यं वाऽजीर्णे नाश्नीयात्। जीर्ण भोजिनम् व्याधिर्नोपसर्पति। जीर्ण शरीरे वर्धमानं व्याधिं नोपेक्षेत। अजीर्णे भोजनं दुःखम्। शत्रोरपि विशिष्यते व्याधिः।

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Eating within limits is health. One should eat nothing-whether wholesome or unwholesome, if there is an indigestion. Disease will not come near a person who has his food digested; one should not neglect the disease if it is progressive in an old (person's) body. Eating on indigestion, is unhappiness. Disease is more horrible than an enemy. Ca. su. 218-223.

g. *peace (śanti from 'śam' - to pacify)*

(Prayers and quests for peace, for oneself, the society and the three worlds have been quite common. Some of them are quite informative, illuminative, poetic and all embracing)

34. तच्छं योरावृणीमहे। गातुं यज्ञपतये। दैवी स्वस्तिरस्तु नः। स्वस्तिर्मानुषेभ्यः। ऊर्ध्वं जिगातु भेषजम्। शं नो अस्तु द्विपदे शं चतुष्पदे।

"We choose that happiness and welfare and success (or progress) to the sacrifice and the sacrificer; may divine fortune be ours; let there be good for (our) men; may medicine (or remedy) go up (i.e. prosper) (and) may there be happiness to our men and quadrupeds". (PVK) Taittiriya samhita. 11.6.10.

35. इमानि यानि पंचेन्द्रियाणि मनः षष्ठानि मे हृदि बृहृमणा संशितानिसृ यैरेव साजे घोरम् तैरेव शान्तिरस्तु नः

"These five senses and the sixth one,. mind, placed by Brahma in the heart - these seven themselves create what is terrible (and therefore) let there be peace for us by these themselves." Atharva 19.9.5. (PVK)

36. ताभिः शान्तिभिः सर्वं शान्तिभिः शमयामोऽहं यदिह घोरम् यदिह क्रूरम् यदिह पापम् तच्छान्तम् तच्छिवम् सर्वमेव शमस्तु नः।

(*rites for peace*) "The earth, mid-regions, heaven, waters, trees and plants, all gods - these have become appeased and auspicious by the *śanti* rites performed by the composer and that by these *śantis*, by all santis, I (we) appease (remove the evil effect of) what is here terrible, what is cruel, what is evil; may all that, be beneficial and happy for us". PVK 721.

37. "Śami tree (*Prosopis spicigera*) is particularly associated with bringing peace. *Śantis* were prescribed in the vedic literature, the *śrauta sūtras, Sāmavidhana brāhmaṇa* and *Ṛgvidhāna*, not only for appeasing the angry divinities or powers of evil, but also for occurrences like bad dreams or of portentous phenomena like the sun's or moon's appearances, the cries of unlucky birds, etc. - very much elaborated in post-vedic literature (PVK 754) - there almost appearing a cult of *śantis* in medieval times and also *prayaścitta* - penalities. Subjects treated of in the Madanaratna (1425-1450 AD) on *Śāntika-pauṣṭika* are very extensive and include some topics of medico-historical interest: *śantis* of the *tithi* and weekday when fever and other diseases seize a man: *śantis* for birth on *Amavāsya*, or *Mūla, Āśleṣa* and *Jyesṭha nakṣatra*; for birth on the same *nakṣatra* as that of the father or (elder) brother; birth on *gaṇita, vaidhṛti, vyatīpāta yoga, sankrānti, viṣanāḍi*, eclipses; for protecting foetus; for easy delivery, for removing pains;....applying ointments, fumigation with mantras when a child is seized; for birth of twins..."(PVK p. 736-737).

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38. Peace (*śanti*) rite is: - a rite prescribed in the *śastra* (religious text), which (rite) has its motive or urge in sinfulness that is not clear (i.e. that is only inferred or presumed), that removes evil effects relating only to this world,. and the performance of which does not lead on to sin. The first clause excludes gifts made to remove diseases like tuberculosis; the second distinguishes *śantis* from sacrifices (intended to secure other wordly rewards) and *prāyascittas* (that yield consequences in this world as well as in the next) and the last clause ... from rites of black magic, which is sinful'. (PVK 756-757)

39. Diseases and bodily defects as due to sins committed in past lives (PVK p. 174-75)

"It was believed in very ancient times that diseases were the consequences of sins (a belief not confined to India. See Gospel of St. John 9.1-3 when a man blind from birth came before Jesus, the disciple asked him 'who did sin, this man or his parents that he was born blind'). In Atharvaveda (आपो अग्रम् दिव्या ओषधयः। तास्ते यक्ष्मम् एनस्यमड्.गादंगादनीनशन् VIII. 7.3) plants are said to have destroyed from each limb the diseases due to sin. Manu XI 49. 52, Vas. 20. 44, Yaj III 209-211 ... state the diseases and bodily defects from which sinners suffer after they are born as men. As a sample, a *yaj* may be cited here: the murder of a *brāhmaṇa* suffers from tuberculosis, a drinker of *sura* has black teeth, ... one guilty of incest suffers from leprosy; the thief of food suffers from dyspepsia, one who stealthily learns without permission (or one guilty of plagirarism) is born dumb, one who mixes up inferior corn with superior corn is born with excessive limbs (six fingers, etc.), a back biter is born with pus in the nose, etc. Even medical works like Caraka (Su. 1. 116) held the belief that diseases were the consequences of actions done in past lives. PVK IV. 174-75.

40. *Signs of approaching death:* "Several works specify the signs indicative of the approach of death. *Śantiparva* (Ch. 348.9.17), Devala quoted in *Mokṣakāṇḍa* of the *Kalpataru* (pp. 248-250), *Vāyupurāṇa* (Ch. 10, 1-32)... contain long lists i.e. a man ... not able to see the star of Arundhati which he could formerly see, nor the pole-star not the full moon, nor his own reflection in another man's eye has only one year to live... he who cannot hear the humming sound in his ear (when closed with fingers) or cannot see the light in the eye is going to die immediately.

But the sayings of the Rishis of medical works appear to be based on sounder and obsevational basis and may need a critical study on modern line". (PVK).

h. *social health-mental*

41. सत्यं भूतेदया दानं बलयो देवतार्चनम्। सद्वृत्तस्य अनुवृत्तिश्च प्रशमो गुप्तिरात्मनः।।
हितं जनपदानां च शिवानामुपसेवनम्। सेवनं ब्रह्मचर्यस्य तथैव ब्रह्म चारिणाम्।।
संकथा धर्म शास्त्राणां महर्षीणां जितात्मनाम्। धार्मिकैः सात्विकैर्नित्यं सहास्या वृद्ध संमतैः।।
इत्येतत् भेषजं प्रोक्तं आयुषः परिपालनम्। येषामनियतो मृत्युः तस्मिन् काले सुदारुणे।।

Truthfulness, compassion for creatures, charity, sacrifices, worship of the gods, compliance to right conduct, tranquility; (prophylactic) protection of oneself, taking resort to (living in) a community which is wholesome and beneficial, the keeping of continence and also the company of the continent; consulting and narrations of scriptures, the sages and the great self-restrained sages and the constant association (lit. sitting together) with the righteous, the well dispositioned and those who are approved of by the elders - all this is spoken of as medicine - and a

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measure of preserving life, to those who are destined to live in these terrible times (of epidemics). Cs. vi. 3. 15-18.

तमुवाच भगवानात्रेयः - सर्वेषामपि अग्निवेश, वाय्वादीनां यद्वैगुण्यमुत्पद्यते तस्य मूलमधर्मः, तन्मूलं वाऽसत्कर्म पूर्वकृतं; तयो र्योनिः प्रज्ञापराध एव।

The revered Atreya told him "For everything whatsoever Agnivesa, the wind and the like, whatever that becomes deranged, the source of it all is unrighteousness, *adharma,* or a previously performed act having its source in this *adharma*. Of both, the source is: volitional transgression alone."

तद्यथा-यदा वै देश नगर निगम जानपद प्रधाना धर्ममुत्क्राम्याधर्मेण प्रजां वर्तयन्ति, तदाश्रितोपाश्रिताः पौरजनपदा व्यवहारोपजीविनश्च तमधर्ममभिवर्धयन्ति, ततः सोऽधर्मः प्रसभं धर्ममन्तर्धत्ते, ततस्तेऽन्तर्हित धर्माणो देवताभिरपि त्यज्यन्ते।

"For instance - whenever the ruling authorities of a country, a city, a corporation, or a community behave with the public in an unrighteous manner, having themselves transgressed the rules of *dharma* , then their subordinates and undersubordinates, the townfolk and the community people as well as those who live by practising professions, tend to promote the same unrighteousness and the lawlessness. Thereafter, that unrighteousness first makes the *dharma* to vanish compulsively and then even the gods abandon these people from whom the principle of law has become a fugitive".

तेषां तथा अन्तर्हित धर्माणामधर्म प्रधानानां अपक्रान्त देवतानां ऋतवो व्यापद्यन्ते; तेन नापो यथाकालं देवो वर्षति न वा वर्षति विकृतं वा वर्षति, वाता न सम्यगभिवान्ति क्षितिर्व्यापद्यते, सलिलानि उपशुष्यन्ति, ओषधयः स्वभावं परिहाय आपद्यन्ते विकृतिं; तत उद्ध्वंसन्ते जनपदाः स्पृश्याभ्यवहार्य दोषात्।

"For them, who have thus chastened out the righteousness, for whom unrighteousness is the predominating rule and who have been given up by the gods, the seasons get deranged; by that, the gods do not rain in time or it does not rain at all or it rains abnormally; winds do not blow properly; the earth becomes afflicted; the waters dry up; the herbs giving up their innate nature attain a distortion. In consequence, whole communities of people perish by epidemics by the morbidities of contact (contageous diseases?) or the food stuffs used".

तथा शस्त्रप्रभवस्यापि जनपदोध्वंसस्य अधर्म एव हेतुर्भवति। ये अतिप्रवृद्ध लोभ क्रोध मोहमानास्ते दुर्बलानवमत्य आत्मस्वजनपरोपघाताय शस्त्रेण परस्परमभिक्रामन्ति, परान् वा अभिक्रामन्ति परैर्वा अभिक्राम्यन्ते।

"In the same manner, it is the unrighteousness alone that is the cause of destruction of whole communities by means of armaments. Those who are moved by extravagant and long nurtured greed, anger, folly, arrogance, despising the weak, for the destruction of themselves, their own people and the enemy, come into armed conflict either among themsleves or the others or are themselves attacked by others". Cs. vi. 3, 20-21.

42. वृत्ति संकोचमन्विच्छेत् न ईहेत धन विस्तरम्। धन लाभे प्रवृत्तस्तु ब्राह्मण्यादेव हीयते।।

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(The Brahmin) should be in search of contracting his professional ife (i.e. preiestly concerns) and should not desire to expand his wealth. If (he) gets engaged in earning money, he will get lost from the brahminness itself. Vyāsa q. in Parāśara.

43. अभिगम्य उत्तमं दानं आहूयैव तु मध्यमम्। अधमम् याचमानाय सेवादानं तु निष्फलम्।।

(*giving gifts*) The gift that is given by oneself going to the recipient is the best. What is given after calling him to oneself is medium. Giving to one who asks for it is despicable. Giving gifts after taking service from him (and considering it as a *dāna*) is fruitless. - Parāśara. 1.29.

गत्वा यद्दीयते दानं तदनन्तफलं स्मृतम्। सहस्र गुणमाहूते याचिते तु तदर्धकम्।।

The gift which is given by oneself going to the recipient is considered to be of countless merits; that given after calling him has thousand merits; that, given after being asked for, has half of this merit. Mitaksara.

(*social medicine - duties of the individual to maintain mental health - by implication, of immense value to the society as well*)

44. इमांस्तु धारयेत् वेगान् हितार्थी प्रेत्य चेह च। साहसानामशस्तानाम् मनोवाक् काय कर्मणाम्।।

He who desires his own welfare here as well as in the hereafter (in the next world) should suppress the following urges: (the urges) of rashness and adventurism as well as vulgarity in the (several) acts of the mind, the speech and the body.

Illustrations of the suppressible urges:

लोभ शोक भय क्रोध मान वेगान् विधारयेत्। नैर्लज्येर्ष्यातिरागाणां अभिध्यायाश्च बुद्धिमान्।।
परुषस्य अतिमात्रस्य सूचकस्य अनृतस्य च वाक्यस्य अकालयुक्तस्य धारेयेत् वेगमुत्तिथम्।

(i) *of the mind*: The intelligent man should suppress the urges of greed, grief, fear, anger, prestige and egoism; shamelessness, covetuousness and jealousy; excessive attachment and the intense desire to take away the wealth of the others.

परुषस्य अतिमात्रस्य सूचकस्य अनृतस्य च। वाक्यस्य अकाल युक्तस्य धारयेत् वेगमुत्थितम्।।

(ii) *of the speech*: He should suppress the outburst of the urge of speech that is very harsh, insinuating, false or untimely.

देह प्रवृत्तिर्या काचित् विद्यते परपीडया। स्त्री भोग स्तेय हिंसाद्या तस्या वेगान् विधारयेत्।।

(iii) *of the body*: He should suppress the urges that arise from whatever tendencies that are there of the body, for tormenting others, enjoying a woman, stealing, violence and the like.

पुण्य शब्दो विपापत्वात् मनोवाक्काय कर्मणाम्। धर्मार्थकामान् पुरुषः सुखी भुङ्क्ते चिनोति च।।

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He who follows these measures becomes holy and free from sins of the activities of the mind, the speech and the body, and thereby enjoys a religious merit, an economic prosperity as well as a fulfilment of his personal desires and prospers for ever as well. Cs. su. 7. 26-30.

On should never take up an action all on a sudden and at the spur of a the moment. That is foodhardiness and the best means of securing a calamity. Wealth and fortune themselves select one who does an act, after full scrutiny enamoured as they are, of these (good) qualities (in him). Bhāravi.

The opinions and all the engagements of all beings are meant to secure happiness (to themselves). And, that happiness will not be there if there is no *dharma*. Therefore one should practise *dharma*.

45. सत्यं दमस्तपो दानं अहिंसा धर्मनित्यता। साधकानि सदा पुंसां न जातिर्न कुलं नृप।।

(*caste duties - varṇa dharma*) Truthfulness, self-restraint, doing penance, (habit of) giving gifts, (practising) non-violence and constantly doing what is *dharma* - these are the means (of life) for (all) persons always; there is no consideration (in waiving the obligations of these duties of life) on the basis of either the caste or the family. Vana Parva.

सत्यं दानं अथाद्रोह आनृशंस्यं त्रपा घृणा। तपश्च दृश्यते यत्र स ब्राह्मण इति स्मृतः।।
शूद्रे च एतत् भवेत् लक्ष्म द्विजे तच्च न विद्यते। नैवै भवेत् शूद्रो ब्राह्मणो न च ब्राह्मणः।।

Truthfulness, giving gifts and then, non-hating, kindliness, bashfulness, compassion and tenderness, (doing) penance - where these are seen, he is called a *brāhmin*. If these distinctive features are seen to occur in a *śūdra* and they do not occur in a *brāhmin*, such a *śūdra* will not become a *śūdra* nor such a *brāhmin*, a *brāhmin*. Śāntiparva 189. 4,8

46. न गृहं गृहमित्याहुः गृहिणी गृहमुच्यते। गृहं तु गृहिणीहीनं अरण्यसदृशं मतम्।।

(*family life*) House is not called a house; it is the (existence of a) wife (therein, because of which) it gets called as a house. A house without a house-wife is considered to be similar to a forest. Śāntiparva. 144.6.

नास्ति भार्या समोबन्धुः नास्ति भार्या समो गतिः। नास्ति भार्या समो लोके सहायो धर्म संग्रहः।।

There is no relative similar to a wife, there is no final resort similar to a wife. There is no help in this world in the path of *dharma* similar to a wife. Śāntiparva 144.16.

यदा भार्या च भर्ता च परस्पर वशानुगतौ। तदा धर्मार्थकामानां प्रयाणमपि संगतम्।।
कथं भार्यामृते धर्म अर्थं वा पुरुषः प्रभो। प्राप्नोति कामम् अथवा तस्यां त्रितयमाहितम्।।
तथैव भर्तारमृते भार्या धर्मादि साधने। न समर्था त्रिवर्गोयं दाम्पत्यं समुदाश्रितः।।

When the wife and the husband are mutually under control of each other, it is then that the journey (of life) for the securement of religious merit, material wealth and personal desires is proper and appropriate. How can a person secure religious

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merit or material wealth or (even) personal desires if this triad is unwholesome to her. Exactly similarly, a wife is (also) incapable of securing these *dharma* and the like. This triad firmly rests on the family life. Mārkandeya purāṇa 21. 69. 71.

आम्नाये स्मृति तन्त्रे च लोकाचारे च सूरिभिः। शरीरार्धं स्मृता भार्या पुण्यापुण्य फले समा।

In the *vedas*, in the technical treatises of smṛti, and in the ways of the world, it has been considerd by the learned men that wife is half the body and an equal sharer in the fruits of holy as well as sinful acts. Bṛhaspati quoted by Aparārka (p. 740. PVK)

47. शौचं च द्विविधं प्रोक्तं गौणमुख्येन प्रभेदतः। तयोस्तु वारुणं मुख्यं तत्पुनः षड्विधं भवेत्।।
नित्यं नैमित्तिकं काम्यं क्रियाङ्ग मलकर्षणम्। क्रिया स्नानं तथा षष्ठं षोढा स्नानं प्रकीर्तितम्।।

(*personal hygiene*) "Cleanliness is said to be of two kinds on the basis of the difference such as secondary and primary. Of these, bathing by water is primary and this is of six kinds: daily, for a special occasion, optional, as a part of a ritualistic ceremony, to remove away the dirt and sixth as a ritual in itself – six types of bathing are thus enumerated." quoted by Aparārka (PVK 127)

शौचं नाम धर्मादिपथो ब्रह्मायतनं श्रियोधिवासो मनसः प्रसादनं देवानां प्रियं शरीरे क्षेत्र दर्शनं बुद्धि प्रबोधनम्।

"Cleanliness is the first path of *dharma*, it is the resting place of *brahma* (veda) the abode of Śri (prosperity), the means of clearing (soothing) of the mind, the favourite of gods, the means of realising the ātman and the awakener of intelligence.: Harita Griha Ra. (PVK 651).

i. *social duties*

48. तपः परम् कृतयुगे त्रेतायां ज्ञानमुच्यते। द्वापरे यज्ञमाहुः दानमेकं कलौ युगे।।

dana or giving gifts: (The principal aspects of religious life were respectively) penance in *Kṛta* age, metaphysical knowledge in Treta, sacrifice in *Dvapara* and only giving gifts in *Kali*. (PVK) Manu 1.86

यतीनां तु शमो धर्मास्तु अनाहारो वनौकसाम्। दानमेव गृहस्थानां शुश्रूषा ब्रह्मचारिणाम्।

"Queiscence, is the *dharma* of ascetics; cessation from taking ordinary food, that of forest hermits; making gifts, that of householders; and, obedience (or service), that of the *brahmacārins* (students). (PVK). Yamadharmaśāstra, quoted in Hemādri (dana p.6)

प्रच्छन्नानि च दानानि ज्ञानं च निरहंकृतम्। जप्यानि च सुगुप्तानि एषां फलमनन्तकम्।।

"Reward of making gifts secretly; possessing knowledge without being puffed up; and engaging in *japa* without others seeing it, is infinite" (PVK)

इष्टं दत्तमधीतं वा विनश्यति अनुकीर्तनात्। श्लाघानुशोचनाभ्यां च भग्नतेजो विपद्यते।।
तस्मादात्मकृतं पुण्यं न वृथा परिकीर्तयेत्।

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"Sacrifice, gift and study lose their power and perish by being declared to others, by boasting about them or by repenting of having done them. Therefore one should not without good reason (such as protecting a gift etc.) proclaim one's (own) meritorious act." Devala quoted by Aparārka p. 290 (PVK)

तस्मात् त्रिभागं वित्तस्य जीवनाय प्रकल्पयेत्। भाग द्वयं तु धर्मार्थं अनित्यं जीवितं यतः।।

"One should set apart three parts out of five from his acquisitions for himself and his family and two parts for *dharma*, as life is evanescent." Śivadharma.

मोघमन्नं विन्दते अप्रचेताः सत्यं ब्रवीमि वध इत्स तस्य। नार्यमणं पुष्यति नो सखायं केवलाघी भवति केवलादी।

"I declare it as true that it is an unenlightened person who secures food in futility, who is merely a sinful one who does not offer food to the gods nor to his friends but eats it only to fill his own belly." Rg veda X117. 6. (PVK)

अघं स केवलं भुङ्क्ते यः पचति आत्मकारणात्।

"The man who cooks food only for his own sake (and not for offering to gods and men) eats merely sin". 934 Manu III 118 (PVK V.)

सर्वेषामेव दानानाम् अन्नं श्रेष्टमुदाहृतम्।... प्राणा हि अन्नं मुनष्याणाम् तस्मात् जन्तुः प्रजायते।
अन्ने प्रतिष्टिता लोकाः तस्मादन्नं प्रशस्यते...अन्नस्य हि प्रदानेन स्वर्गमाप्नोति मानवः।

"The gift of food is superior to all gifts, food is the life of men, from food springs all beings; the worlds are dependent on food, therefore food is praised; man secures heaven by the gift of food."

शुनां च पतितानां च श्वपचां पाप रोगिणाम्। वायसानां कृमीणां च शनकैर्निवपेत् भुवि।।

"He was to place food on the ground for person who had lost caste, who suffered from loathsome diseases, to *cāṇḍālas*, dogs, crows and even insects."
49. "Underlying these provisions (for giving gifts) was the noble sentiment of universal kindliness and charity, the persistent idea, that, in spite of social gradations, rules and prejudices dividing men from each other, one Supreme Light pervades and illuminates the meanest of creatures and makes the whole, kin. This spirit of the householder to regard it as his duty to offer food to all needy persons and particularly to poor and deserving students and *brāhmaṇas* has prevailed almost to the present day, though during the last few years shortage of food, high prices and rationing have undermined it a great deal." PVK. V. 935-936.

न स्वर्गं ब्रह्मलोके वा तत्सुखं प्राप्यते नरैः। यदार्त जन्तुर्निवारण दानोत्थमिति मे मतिः।
यज्ञ दान तपासीह परत्र च न भूतये। भवन्ति तस्य यस्यार्त परित्राणे न मानसम्।।

(Sometimes the *Purāṇas* express ideas that might strike us as rather modern,

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when they put forward social service and removal of suffering and distress as the highest dharma. In the Mārkaṇḍeya, a king solemnly states) "men do not obtain that happiness in heaven or in the world of Brahma, which springs from giving relief to distressed beings. Sacrifice, gifts, *tapas* do not conduce to the relief here and in the next world of that man whose heart is not set on relieving the distressed". (PVK. V. 949).

50. परोपकरणं येषां जागर्ति हृदये सताम्। नश्यन्ति विपदस्तस्य सम्पदः स्युः पदे पदे।।
तीर्थ स्नानेर्न सा शुद्धिः बहुदानेन तत्फलम्। तपोभिरुग्रैः तन्नापि यमुपकृत्य यदाप्यते।।
परिनिर्मथ्य वाग्जालं निर्णीतमिदमेव हि। नोपकारात्परो धर्मो नापकारादधमं परम्।।

"Adversities of those good men in whose heart doing good to others is awake (i.e. active) vanish and prosperity comes to them at every step. That purity is not secured by baths at holy places, that reward is not obtained by numerous gifts, that (result) is not obtained by severe austerities, that (which) is obtained by doing good to others. After churning all extensive dicta the conclusion reached is this viz., there is no higher *dharma* than doing good to others, and there is no sin greater than harming others." (PVK V. 949) Skandakashi Khanda 6. 4-5 & 7.

51. जीवितं सफलं तस्य यः परार्थोद्यतः सदा। अग्निरापो रविः पृथ्वी धान्यानि विविधानि च। परार्थं वर्तनं तेषां सतां चापि विशेषतः।

"The life of the man who always strives for the good of others is fruitful (blessed); fire, water, the sun, the earth and various kinds of crops exist for the benefit of others and particularly the good (who exert for others' benefit). (PVK) Brhma. 125. 36-37.

यावद् भ्रियेत जठरं तावत् स्वत्वं हि देहिनाम्। अधिकं योऽभिमन्येत स स्तेनो दण्डमर्हति।।

("It is surprising that Bhagavata avers what is in advance of modern socialistic doctrines:)" Men have ownership over only that much as would fill their belly; he who thinks as his own what is more than that is a thief and deserves punishment (as such)". (PVK)

52. एष हि एव साधु कर्म कारयति तं यमेभ्यो लोकेभ्यो उन्निनीषते एष डएवासाधुकर्म कारयति तं य मधो निवीषते।

(*Some general guidelines*) "The Lord of all makes that man perform good works whom He desires to raise to higher worlds than these and He makes that man commit bad deeds whom he wishes to drag down." (PVK. IV. 9) Kausitaki brahmana III. 9

त्रिविधं नरकस्येदं द्वारं नाशनमात्मनः कामः क्रोधस्तथा लोभः तस्मात् एतत् त्रयं त्यजेत्।।

These are the three kinds of door to hell and one's own destruction: lust, anger and greed. Therefore (one) should abandon these three. Bhagavadgita

विहितस्य अननुष्ठानात् निन्दिना च सेवत्। अनिग्रहात् च इन्द्रियाणां नरः पतनमृच्छति।

By neglecting what is prescribed and practising what is forbidden and not controlling one's senses, man takes to the cause of falling down. Yagna valkya. III. 219.

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अकुर्वन् विहितं कर्म प्रतिषिद्धानि च आचरन्। प्रायश्चितीयते हि एवं नरो मिथ्या तु वर्तयन्।।

Not doing what is prescribed and practising what is forbidden, man makes himself liable for expiation in this manner by conducting himself in a false way. Santiparva. 34.2.

53. अवगाह्यापि मलिनो हि अन्तश्शौचविवर्जितः। शैवला झषका मत्स्याः सत्वा मत्स्योप जीविनः।।
सदावगाह्य सलिले विशुद्धाः किं द्विजोत्तमाः। तस्मादाभ्यन्तरं शौचं सदा कार्यं विधानतः।।
आत्मज्ञानांभसि स्नात्वा सकृदालिप्य भारत। स वैराग्यमृदा शुद्धाः शौचमेवं प्रकीर्तितम्।।

(*importance of mental purity*) "Though the impure moss, fish and animals subsisting on fish are bathed and (in fact) they are always taking bath in water, are they then great Brahmins ? Therefore, one should always take up properly to the internal purity. One should take bath in the water of knowledge of the self, apply once the sandal paste of faith and purity on self by the day in the form of desirelessness. This is what is declared to be the real purity." (PVK) Lingapurāṇa 8,34,36.

j. *society-organisation*

54. शम व्यायामौ योगक्षेमयोर्योनिः। कर्मारम्भाणां योगाराधनो व्यायामः। कर्मारम्भाणां योगाराधनो कर्म फलोप भोगानां क्षेमाराघनः शमः।

शम व्यायामयोर्योनिः षाड्गुण्यम्। क्षयः स्थानं वृद्धिरित्युदयास्तस्य।

मानुषं नयापनयौ, दैवमयानयौ। दैवमानुषं हि कर्म लोकं यापयति। अदृष्ट कारितं दैवम्। तस्मिन् इष्टेन फलेन योगोऽयः अनिष्टेनानयः। दृष्ट कारितं मानुषम्। तस्मिन् योग क्षेम निष्पत्तिः नयः, विपत्तिरपनयः। तत् चिन्त्यम्, अचिन्त्यम् दैवम्।

Peace and activity constitute the source of acquisition and security (in a society and its organisation). Activity is that which brings about the accomplishment of works undertaken. Peace is that which brings about a security of enjoyment of the fruits of works (carried out).

The source of peace and activity is the six-fold policy. Decline, stability and advancement are the consequences of that (policy).

Acts of human agency are good policy and bad policy; (acts of) divine agency (are) good fortune and misfortune. For, it is the acts of man and the divine agency that (together) make the world go. That caused by an unseen agency is the divine (act). In that, the attainment of the desired fruit is good fortune; of the undersired (fruit), misfortune. That (which is) caused by a seen agency is the human (act). In that, the coming into existence of well-beingness is good policy; (its) ruin, bad policy. *That* can be thought about; (but) the divine is incalcaulable. Ca. 6.2.1-12.

55. सुखस्य मूलं धर्मः। धर्मस्य मूलमर्थः। अर्थस्य मूलं राज्यम्। राज्यमूलमिन्द्रिय जयः। इन्द्रियजयस्य मूलं विनयः। विनयस्य मूलं वृद्धोपसेवा। वृद्धसेवाया विज्ञानम्। विज्ञानेन आत्मानं सम्पादयेत्। सम्पादितात्मा जितात्मा भवति। जितात्मा सर्वार्थैः संयुज्येत। अर्थसम्पत् प्रकृति सम्पदं करोति। प्रकृति सम्पदा हि अनायकमपि राज्यं नीयते।

The source of happiness is Righteous conduct or *dharma*. The source of *dharma* is material prosperity. The source of material prosperity is the kingdom (and the

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political set up it sustains). The source of kingdom (and the political set up) is the conquest of the (bondage or servitude to the) senses. The source of the conquest of the senses is humility. The source of humility is the service of the elders. It is by service of the elders (and learning from their experience and advice), (one secures) special knowledge or expertise. It is by (such) experise, one should earn the (knowledge) about the Self. The person who has obtained the knowledge of Self becomes the conqueror of the Self. The conqueror of the Self will become united (viz. endowed with) all that is desirable and the material prosperity. Excellence of the material prosperity will render the excellence of nature. By the excellence or the wealth of nature (the whole) kingdom is led about, even though masterless. Ca. su. 1-11.

56. मन्त्रमूलाः सर्वारम्भाः । मन्त्र रक्षणे कार्य सिद्धि र्भवति । मन्त्रविस्रावी कार्यं नाशयति ।...
कार्यान्धस्य प्रदीपो मन्त्रः ।
मन्त्र चक्षुषा परच्छिद्राणि अवलोकयन्ति

All (activities of the kingdom) have their commencement at the consultation among the ministers and the counselling thereof. Success of an undertaking issues forth from guarding (well) the (secrets) of ministerial discussion. One who divulges out such secrets will destroy the undertaking... Ministerial consultations should be guarded from all (possible) doors (through which they can leak out). The kingdom flourishes by the excellence of the ministrations... For a person ignorant (lit. blind) of what course of action (he should take up in a given situation), ministration is like the very lamp (that lights the way). It is by the eye of the ministration that one can perceive the loop - holes in others. Ca. su. 22-30.

मन्त्र काले न मत्सरः कर्तव्यः । त्रयाणां एकवाक्ये सम्प्रत्ययः ।
कार्याकार्य तत्वार्थदर्शिनो मन्त्रिणः ।
षट् कर्णात् भिद्यते मन्त्रः ।

During ministerial consultation one should not indulge in hostility. Assent and firm conviction arises only when there is an agreement among (at least) three members. Those who can well visualise the principle of what is to be done and what is not to be done - they alone are the counsellors (lit. the ministers). The secret of a ministration gets broken (i.e. becomes divulged) if it reaches six ears (i.e. six persons). Ca. su. 31-34.

57. बलवान् अलब्ध लाभे प्रयतेत ।
अलब्धलाभो न अलसस्य । अलसस्य लब्धमपि रक्षितुं न शक्यते ।
न च अलसस्य रक्षितं विवर्धति ।

A strong person should strive for what he has not secured as yet. Securing what is not attained (as yet) is not meant for the lazy. For a lazy person, it is not possible to guard even what he already possesses. And, for a lazy person, what he keeps guarded, does not flourish. Ca. su. 38 - 40.

58. धर्मेण धार्यते लोकः । प्रेतमपि धर्मा धर्मौ अनुगच्छतः । दया धर्मस्य जन्म भूमिः । धर्ममूले सत्यदाने । धर्मेण जयति लोकान् । मृत्युरपि धर्मिष्टं रक्षति । धर्मात् विपरीतं पापं यत्र प्रसज्यते तत्र धर्मावमतिर्महती प्रसज्यते... आत्मविनाशं सूचयति अधर्म बुद्धिः ।

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The world is sustained by *Dharma* or the righteous life. The righteous and the unrighteous (effects) follow even a dead person. Kindness is the birth-place of *dharma*. Truth and giving gifts are rooted in *dharma*. One conquers the whole world by means of *dharma*. Even death will protect a man of righteous conduct. Where a sin counter to a righteous conduct is perpetrated, a great disrespect of *dharma* is committed there.. An inclination to *adharma* indicates an impending self-destruction. Ca. su. 234-242.

अमरवदर्थजातमार्जयेत्। अर्थवान् सर्वलोकस्य बहुमतः। महेन्द्रमपि अर्थहीनं
न बहु मन्यते लोकः। दारिद्र्यं खलु पुरुषस्य जीवितं मरणम्।

One should (continue to) earn material prosperity as if one is going to live eternally. It is the man of money that is respected well by the world. The world will not make much of even the lord of the gods if he is devoid of money. Poverty is indeed a living death for a person. Ca. su. 254-257.

59. अलब्धलाभादि चतुष्टयं राज्य तन्त्रम्। राज्य तन्त्रायत्तम् नीति शास्त्रम्।
राज्य तन्त्रेशु आयत्तौ तन्त्रावापौ। तन्त्रं स्वविषयकृत्येषु आयत्तम्। आवापो मण्डल निविष्टः। सन्धिविग्रहयोनिर्मण्डलः।
नीति शास्त्रानुगो राजा।

The technique of political organisation lies in securing the four unsecured viz. the securement of what is not obtained as yet, guarding of what is secured, making flourish what is guarded and proper distribution of what is flourishing. Ethical considerations ought to pervade all this technique. (Lit. the science of ethics is embraced within this technique of polity). '*Tantra*' and '*āvāpa*' are embraced within the technique of polity. '*Tantra*' (or, the cardinal methodology) of polity is what is carried out within one's own territory. *Āvāpa* is what concerns the other kingdoms nearby viz. The zone of the adjoining kingdoms (viz. the foreign policy). The zonal policy lies in the details of friendly conciliation, or the discords (one can plant). The king is one, who keeps up the consideration of ethics (in managing and conducting all these affairs). Ca. su. 42-48.

60. न व्यसनपरस्य कार्यावाप्तिः। इन्द्रियवशवर्ती चतुरंगवानपि विनश्यति। नास्तिकार्यं द्यूत प्रवृत्तस्य। मृगयापरस्य धर्मार्थौ विनश्यतः। अर्थेषणा न व्यसनेषु गण्यते। न कामासक्तस्य कार्यानुष्ठानम्। अग्निदाहादपि विशिष्टं वाक्पारुष्यम्। दण्डपारुष्यात् सर्वजनद्वेष्यो भवति। अर्थतोषिणं श्रीः परित्यजति।

One given to vice will never secure success in one's under takings. One who is a slave of the sense will get destroyed even if he has the four components of the military force (viz., the elephants, the horses, the chariots and the foot-soldiers). There is no accomplishment of a work, for one engaged in gambling. One given over to hunting gets destroyed in *dharma* as well as material wealth. Pursuit of material wealth is not considered to be one of the vices. One intent on lust can never perform any work. Harshness of speech is more acute than getting burned with fire. By harshness of punishment one becomes despicable by all. The goddess of wealth abandons one who gets satisfied with the material wealth (he has secured). Ca. su. 66-77.

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61. वृत्तिमूलमर्थलाभः । अर्थमूलौ धर्म कामौ । अर्थमूलं कार्यम् । यदल्प प्रयत्नात् कार्य सिद्धिर्भवति । उपायपूर्वं न दुश्करं स्यात् । अनुपायपूर्वं कार्यं कृतमपि नश्यति । कार्यं पुरुष कारेण लक्ष्यं सम्पद्यते । पुरुषकारमनुवर्तते दैवम् ।

Securing material wealth ensues from the business of the occupation (that one choses). Righteous conduct and satisfaction of personal desires - both have their source in the material prosperity (that one can command). Accomplishment of a work (also) has the material wealth as its root; it is by this (material wealth) one can secure success in one's undertakings by (even a very) little effort. There is nothing that is impossible if carried out with the requisite strategem (for the task in question). A work even if carried out will become fruitless if not accompanied with the strategem (that is needed). For one desirous of accomplishing the tasks undertaken, adopting the strategem needed, is the only help (he can call forth). The work gets accomplished in accordance with the personal effort that one puts forth. Fortune follows the personal effort. Ca. su. 89-98.

62. पूर्वं निश्चित्य पश्चात् कार्यमारभेत । कार्यान्तरे दीर्घसूत्रता न कर्तव्या ।
न चल चित्तस्य कार्यावाप्तिः । हस्तगतावमाननात् कार्य व्यतिक्रमो भवति । दोष वर्जितानि कार्याणि दुर्लभानि । दुरनुबन्धं कार्यं नारभेत ।

One should determine (everything) earlier and then only commence an undertaking. In the middle of carrying out a work, one should not indulge in too much of prolonged contemplation. There is no succcess for the undertaking to a person of fickle mind. If one despices what is available at hand, there will occur a deviance in the task undertaken. It is difficult to come across the works that are completely blemishless. One should not commence a task that is inherently difficult.

कालवित् कार्यं साधयेत् ।
कालातिक्रमात् काल एव फलं पिबति । क्षणं प्रति काल विक्षेपं न कुर्यात् सर्वकृत्येषु ।
देशकालविभागौ ज्ञात्वा कार्यमारभेत ।
दैवहीनं कार्य सुसाधमपि दुःसाधं भवति ।

One should accomplish a task with a full knowledge of the timeliness (that is requisite). If there is a transgression in time, the time itself will eat up the fruit of the action. In all the undertakings one should not waste even a moment of time. Knowing (fully well) the factors of place and time (that are appropriate to the action), one should commence the work. (But, it also happens that) a work which is devoid of the backing of fate becomes difficult of accomplishment, even though by itself, it is easy. Ca. su. 107-111.

नीतिज्ञो देशकालौ परीक्षेत । परीक्ष्यकारिणि श्रीश्चिवरं तिष्टति । सर्वाश्च सम्पदः सर्वोपायेन परिग्रहेत् । भाग्यवन्तम् अपरीक्ष्य कारिणं श्रीः परित्यजति । ज्ञानानुमानैश्च परीक्षा कर्तव्या ।

The knower of ethics should examine (well) the (factors of place and time) (before he commences a task). Wealth stays long in a person who examines (well). All kinds of wealth should be secured by all strategems (that are needed). Wealth abandons even a fortunate man, if he does not carry out his tasks after due examination. Such an examination should be carried out with the (aids of) the knowledge (needed) and the inferences (that are possible). Cā. sū. 112-116.

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k. *sin and disease – a social belief*

63. "Disease was considered as one of the consequences of sin. Here the doctrines of *karma* and *punarjanama* (rebirth) are to be remembered, where the basic proposition is that cause and effect are as inseparably linked in the moral sphere as assumed in the physical sphere. A good action has its reward and a bad act, retribution. If the latter does not yield consequences at once or in this life, the soul begins another existence and undergoes suffering for its past bad deeds." (PVK).

64. यथाकारी यथाचारी तथा भवति साधुकारी साधु भवति पापकारी पापो भवति पुण्यः पुण्येन कर्मणा भवति पापः पापेन। अथो खल्वाहुः काममय एवायं पुरुष इति स यथाकामो भवति तत्कर्तुर्भवति यत्कर्तुर्भवति तत्कर्म कुरुते यत्कर्म तदभिसम्पद्यते।

"According as a man acts and according as he believes, so will he be: a man of meritorious acts will be meritorious, a man of evil deeds, sinful. He becomes pure by pure deeds and evil by evil deeds. And here they say that a man consists of desires. And as is his desire, so is his will; whatever deeds he does, that he will reap". (PVK 39) Bṛhadāraṇyaka upaniṣad. IV. 4,5.

न तु भोगादृते पुण्यं पापं वा कर्म मानवम्। परित्यजति भोगाच्य पुण्यापुण्ये निबोध मे।

"Whatever human action it may be, whether good or evil, it cannot be got rid of except by enjoying its consequences; know from me that a man gets rid of good and evil deeds (only) by enjoying their consequences" (PVK 39) Mārkaṇḍeyapurāṇa 14.17.

सर्वे रोगाः पापस्य कर्मणः फलमिति कृत्वा पाप्मेति उच्यते।

All diseases are the fruits of one's sin; and, are thus called a crime. Aruṇadatta.

65. विहितस्य अननुष्ठानात् निन्दितस्य च सेवनात् अनिग्रहात् च इन्द्रियाणां नरः पतनमृच्छति।।

(*karmajaroga – diseases due to acts of previous birth*) By not practising what is wholesome and by taking recourse to what is unwholesome as well as by not controlling his senses, a man falls down. Yāgnavalkya Smriti.

अकुर्वन् विहितं कर्म प्रतिषिद्धानि च आचरन्। प्रायश्चित्तीयते हि एवं नरो मिथ्या तु वर्तयन्।।

Not doing the wholesome work and doing the proscribed ones, a man becomes liable to undergo penetentiary prescriptions, behaving thus in an untrue manner. Santi parva 34.2.

दशधर्मपथान् रक्षन् जयेन्नाभ्यन्तरानरीन्।
हिंसास्तेयान्यथाकामं पैशुन्यं परुषानृतम्। सम्भिन्नालापं व्यापदमभिध्यां दृग्विपर्ययम्।।
पापं कर्मेति दशधा कायवाङ्मानसैस्त्यजेत्।

Keeping the ten pathways of *dharma* one should conquer the enemies that are within oneself. (They are:), violence, theft, erroneous lust, slanderous talk, harsh speech and behaviour, falsehood and idle talk, evil intent or thinking, hatred to

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others, prosperity and a lop sided perspective (for men or matters, and, as opposed to what is usual) - the acts of sin are these ten, of the body, the speech and the mind; one should abandon them. A. samg. su. 3. 116-117 (This corresponds to the ten sins recognised in Buddhist philosophy MW).

कर्मना हि शरीरेषु रोगाः शरीर मानसाः ।
शरा इव पतन्तीह विमुक्ता दृढ धन्विभिः ।।

The diseases born of one's own acts (in the previous birth), somatic or mental, befall upon the bodies of the persons without any fail, like the arrows shot by well practised archers. Subhāṣitāvali

निर्दिष्टं दैव शब्देन कर्म यत्पौर्वदेहिकम् । हेतुस्तदपि कालेन रोगाणामुपलभ्यते ।

The work done in the body of the previous birth is designated by the term, god-given. That itself will bring forth diseases in course of time. Caraka

त एते पुनर्द्विविधा भवन्ति प्रत्युत्पन्नकर्मजाः पूर्व कर्मजाश्चतस्मात् दुष्ट हेतवः प्रत्युत्पन्नकर्मजा विपरीता दैवजन्मानः ।

The (diseases) are of two types: what is due to the acts done just previously (i.e. in this birth) or that which is due to the acts of previous birth. Therefore the diseases due to acts done just previously have visible reasons; the god-given are contrary. A samg.

66. गुणप्रतिलोम्यम् अभावः प्रदोषः प्रसंगः पीडा वा व्यसनम् ।
व्यस्यति एवं श्रेयस इति व्यसनम् ।

(*vice, evil passion. Vyasana*) (Vice is said to arise either from love of pleasure or from anger; eight are enumerated under the first head viz., *mṛgayā* (hunting), *dyūta* or *akṣa* (gambling), *divā-svapna* (sleeping by day), *parivāda* (accusation), *striyah* (womanising), *mada* (arrogance), *taurya trika* (the triple symphony - song, dance and instrumental music), and eight under the second, viz., *paiśunya* (back-biting), *sāhasa* (adverturism), *droha* (hostile disposition), *īrṣyā* (jealousy), *asūya* (indignation at the merits or happiness of others), *artha-dūṣaṇa* (corruption in the matters of money), *vāk pāruṣya* (harshness in speech) and daṇḍa pāruṣya (harshness in physical punishment) (MW)). (Wilful) inversion of excellence (in others) ; absence (of any positive virtue); (existence of) a great defect (in oneself); addiction (to an evil habit) or affliction (from an incorrigible disease) - These constitute an evil passion. It throws out (a person) from his good, hence it is called *vyasana* (literally meaning deviant throwing : *vya - asana*) Ca. 8.1.3,4.

I. *medicine and law*

67. चिकित्सकानां सर्वेषां मिथ्या प्रचरतां दमः ।

For all physicians who carry out a false practising, there ought to be a punishment. Manu

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मिथ्याप्रचरताम्-सर्वेषां काय शल्यादि भिषजां दुश्चिकित्सं कुर्वता दण्डः कर्त्तव्यः ।

False practising - A punishment should be executed for all physicians, medical, surgical or any other type, who carry out a wrongful medicative procedure. Manvartha muktāvali.

भिषड्. मिथ्याचरन् दण्ड्यः

A physician indulging in wrongful procedure is to be punished. Yāgnyavalkya.

यः पुनर्भिषक् मिथ्या आयुर्वेदानभिज्ञ एवं जीवनार्थं चिकित्सितज्ञोऽहमिति तिर्यड्.मनुष्य राज पुरुषेषु चिकित्सामाचरति असौ दण्डनीयः ।

Any physician, though ignorant of Ayurveda, carries out a medicative procedure on animals, people or royal persons merely for the sake of a livlihood, professing that he is well-versed in Medicine - such a person is to be punished. Mitākṣara.

भिषजः प्राणाबाधिकमनाख्याय उपक्रममाणस्य विपत्तौ पूर्वस्साहस दण्डः, कर्मोपरोधेन विपत्तौ मध्यमः, मर्म वैगुण्यकरणे दण्डपारुष्यं विद्यात् ।

A physician who commences a course of treatment which is likely to endanger life without saying it so (at the outset) should be punished with a charge of sheer adventurism, in case a calamity takes place; the punishment will be of medium severity if there occurs a disablement in bodily activity (of the patient). The punishment ought to be very severe if there is a deviance in a vulnerable spot. Kauṭilya's Arthaśāstra.

68. देहेन्द्रिय विनाशे तु यथा दण्डं प्रकल्पयेत् । तथा तुष्टिकरं देयं समुत्थानं च पण्डितैः ।।
समुत्थान व्ययम् चासौ दद्यादाव्रणविरोपणात् ।

(Manu VII. 287, Yaj. 222, Br (SBE Vol. 33 p. 358 Verses 9-10) prescribe a punishment for causing a pain to the body or loss of a limb and also the expenses of curing the person injured and some solatium to him." PVK). If there is a destruction to the body or the senses one should conceive the punishment as required. Similarly solatium as well as compensation are to be arranged by the learned. Compensatory expenses are to be given till the injury is healed.

गर्भस्य पातने स्तेनो ब्राह्मण्यां शस्त्रपातने । अदुष्टां योषितं हत्वा हन्तव्यो ब्राह्मणोऽपि हि ।

("Katyāyana contains a remarkable statement that:) "Even a *brāhmaṇa* deserves to be killed if he be guilty of causing abortion, if he be a thief (of gold) or if he kills a *brahmaṇa* woman with a sharp weapon or if he kills a chaste woman." (PVK) Kātyāyana dharmasūtra 69.

(*disease as a legal disability*) "The story of the brothers Devapi and Santanu as narrated in the Brhaddevata states that the elder brother Devapi suffered from a skin disease and so refused the kingdom which went to his younger brother Śantanu. In Mahābhārata, Dhṛtarāṣṭra who was born blind though elder had to give up kingdom in favour of his younger brother Pāṇḍu. (PVK 147. 39).

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"On account of certain bodily, mental or other defects and certain conduct also persons were excluded in ancient India from demanding a share on partition and also from taking by inheritance. Gaut. 28.41 Ap. Dh. S.II.6.14-1 Vas. 17-52-53, Vishnu Dh. S. 15-32-39, Baud. Dh. S. II.2, Kaut. III.5 speak of various grounds of exclusion from partition (and inheritance) such as lunacy, Idiocy, impotence, excommunication for grave sins or lapses of conduct, blindness, incurable disease, entering a different asrama (that of forest hermit or *sannyasa*)" (PVK.III 608).

"These grounds of exclusion probably arose from the fact that persons labouring under them being regarded as incompetent to perform religious act and the close connection between property and its use for religious purpose". (PVK) I.1. 41-42).

69. अनम्शौ क्लीबपतितौ जात्यन्धबधिरौ तथा। उन्मत्त जडमूकाश्च ये च केचिन्निरिन्द्रियाः ।

(Manu IX. 201 provides) 'impotent persons, outcasts, persons blind or deaf from birth, insane persons, idiots, the dumb and those deficient in any organ (or senses) are entitled no share." (PVK) Manu.

तत्र क्लीबस्य क्षेत्रजः पुत्रः सम्भवति अन्येषामौरसा अपि।
औरस क्षेत्रजयोर्गहणमितर पुत्रव्युदासार्थम्।।

If the disqualified person has an aurasa son or ksetraja son who is free from the defects mentioned above (such as impotence) he becomes entitled to a share of the joint family property and the daughters of disqualified persons are entitled to be maintained in the family and provisions must be made for their marriage. (Manu. IX 203, Yaj. II. 141) (PVK. III. 617) Mitaksara on Yagnavalkya.

A क्लीब is indicated according to Katyayana : न मूत्रं फेनिलं यस्य विष्ठा चाप्सु निमज्जति। मेढ्रश्च उन्माद शुक्राभ्यां हीनः क्लीबः स उच्यते।

He states the signs of a potent man and in verses 11-13 speaks of the kinds of impotent persons. क्लीब भावे स्त्रियः मूत्र विष्ठा निमन्जनं च- Means of judging about impotence are women, froth of urine and the sinking of the faeces in water." (PVK).

70. *Eugenics, marriage counselling* "Manu regarded a good family as the most important from the eugenic point of view IV 244.' 'One who desires to raise his family to excellence and eminence should always enter into marriage alliances with the best and avoid alliance with the low; four kinds of families even though richly endowed with cattle, wealth, etc. should be avoided in marriage viz. .... in which there is no male progeny, ... which have hairy members, that suffer from piles or consumption or indigestion or epilepsy, white or black leprosy.' Harita: 'offspring is in accordance with the (qualities of the) family of the parents'. Vaj. I 54-55 emphasises the importance of a good family famed for ten generations and freedom from diseases that are hereditarily transmitted and adds that a bridegroom should be young .. and his virility must be carefully tested. Mitaksara on yāgnavalkya 1.55 quotes Narada *(stripāmsa)* who mentions some characteristics of the virile man and enumerates 14 varieties of impotent persons (verses 11-13). Katyāyana mentions what defective bridegrooms are to be avoided viz., the lunatic, one guilty of grave sins, leprous, impotent, one of the same *gotra*, one bereft of eyesight or hearing, an epileptic and adds that these defects are to be avoided even among brides..... Samskāra prakāśa (752-754) contains a long discussion on the question of how from bodily characteristics one can find whether a man will live long or what his prospects would be." (PVK. 430-432).

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"Sapiṇḍatā" should be avoided and (also) cross cousin marraiges : (PVK 452-466). 'And so the six (ascendants) beginning with the father and the six descendants beginning with the son and the man himself as the seventh (in each case) are *sapiṇḍas"*. (PVK 454).

One should marry a girl with whom there is no विरुद्ध सम्बन्ध e.g. the daughter of one's wife's sister or the sister of one's paternal uncle's wife, though there is सपिण्ड relationship then (PVK).

71. (*punishment*) "The ultimate end or goal of most of our philosophy was mokṣa (release from the cycle of birth and death). The same was the ultimate goal of *rājadharma*. But the proximate goal of the State in India was to create such conditions and environments as would enable all men to live in peace and happiness, to pursue their avocations, to follow their own customs and usages and their *svadharma* , to enjoy without interference the fruits of their labour and property acquired by them. The king was the divinely provided instrument to create the conditions of peace, order and happiness." (PVK) Vol. III. 338-39.

'Kauṭilya deals with the *vyavahārapādas* in Dharmāsthīya and Kaṇṭakaśodhana section (IV) speaks of matters dealt with by officers called *pradeṣṭrs* (coroners and police magistrates) while matters falling under the *dharmāsthīya* section (viz. *vyavahārapādas*) were disposed of by judges (*dharmāsthas*). Kaṇṭaka means 'harmful persons.' One of the long list of the matters here, was ' a physician, who undertook the medical treatment of a patient without informing (government officers) of the dangerous nature of the diseases, was to be punished with the first amercement if the patient died, and with the middling fine if the patient died through carelessness of the physician and if the patient suffered some vital injury, the matter was to be dealth with as assault *(daṇḍa pāruṣya)*; ....(*rules were laid for*) fines against merchants ... that cause adulteration of grains, oils, salt, medicines, etc. ... *(and to officers to)* provide for measures against such calamities as fire, pestilential diseases. *Samahartr* (is an officer to) take measures to protect subjects against those who prey upon the people secretly by employing foul means. He has to employ spies under various disguises to find out the honesty or corruptness of officers in the villages; (and) of superintendents, of judges, of magistrates and witnesses and the punishment in these cases is generally banishment. Kautilya W. 5 deals with the detection of young men inclined to robbery or adultery by the employment of spies and agent provocateurs in the guise of ascetics and persons reputed to possess miraculous powers". (PVK 253-354).

examination of the just then dead body - postmortem.

72. *from Kauṭilya's Arthaśāstra* (all the translations are from RPK) (filing of law-suits)

धर्मस्थास्त्रयोऽमात्या जनपद सन्धि संग्रहण द्रोण मुखस्थानीयेषु व्यावहारिकानर्थान् कुर्युः ।

Three judges, (all) three (of the rank of) ministers, should try cases arising out of transactions at frontier posts, in the *samgrahaṇas, droṇamukhas* and *sthānīyas.* (head quarters of different ranks).

तिरोहितान्तरागारनक्तारण्योपध्युपहरकृतांश्च व्यवहारान् प्रतिषेधयेयुः । कर्तुः कारयितुः पूर्वः साहस-दण्डः । श्रोतृणामेकैकं प्रत्यर्धदण्डाः । श्रद्धेयानां तु द्रव्य व्यपनयः ।

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They should declare as invalid transactions concluded in absence, inside a house, at night-time, in a forest, by fraud or in secret.

For one who concludes (such a transaction) or induces its conclusion, the lowest fine for violence (shall be the punishment).

The fines shall be half for witnesses, each one of them. For trustworthy persons, however, (there shall be only) annulment of the object.

दाय निक्षेपोपनिधिविवाहयुक्ताः स्त्रीणामनिष्कासिजीनां व्याधितानां चामूढ संज्ञानामन्तरागारकृताः सिद्धयेयुः।

Those concluded inside a house, concerning inheritance, things handed over, deposits and marriage, (or) by women who do not stir out (of their homes), or by sick persons who are not unsound in mind, shall succeed.

धर्मश्च व्यवहारश्च चरित्रं राजशासनम्।
विवादार्थश्चतुष्पादः पश्चिमः पूर्व बाधकः।।

A matter in dispute has four feet, law, transaction, custom and the royal edict; (among them) the later one supersedes the earlier one.

तत्र सत्ये स्थितो धर्मो व्यवहारस्तु साक्षिषु।
चरित्रं संग्रहे पुंसां राज्ञामाज्ञा तु शासनम्।।

On them, law is based on truth; a transaction, however, on witnesses; customs, on the commonly held view of men; while the command of kings is the royal edict.

दण्डो हि केवलो लोकं परं चेमं च रक्षति। राज्ञा पुत्रे च शत्रौ च यथादोषं समं धृतः।।

For, it is punishment alone that guards this world and the other, when it is evenly meted out by the king to his son and his enemy, according to the offence.

अनुशासद्धि धर्मेण व्यवहारेण च संस्थया। न्यायेन चतुर्थेन चतुरन्तां महीं जयेत्।।

For, a king, giving decisions in accordance with law, transaction, settled custom and edict as the fourth, would conquer the earth up to its four ends.

पितृ प्रमाणाश्चत्वारः पूर्वे धर्म्याः मातापितृप्रमाणाः शेषाः। तौ हि शुल्कहरौ दुहितुः अन्यतरा भावेऽन्यतरोवा। द्वितीयं शुल्कं स्त्री हरेत।

The first four are lawful with the sanction of the father, the remaining with the sanction of the father and the mother. First, those two receive the dowry of the daughter, or one of them in the absence of the other. The woman shall receive the second dowry.

वर्षाणि अष्टौ अप्रजायमानामपुत्रां वन्ध्यां च आकाङ्क्षेत, दशनिन्दुम्, द्वादशं कन्या प्रसविनीम्।
ततः पुत्रार्थी द्वितीयां विन्देता तस्यातिक्रमे शुल्कं स्त्रीधनमर्धं चाधिवेदनिकं दद्यात्, चतुर्विंशतिपणपरं च दण्डम्।

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The (husband) shall wait for eight years if the wife does not bear offsprings or does not bear a son or is barren, for ten if she bears dead offspring, for twelve if she bears only daugthers. After that, he may marry a second wife with the object of getting a son. In case of transgression of that (rule), he shall hand over the dowry, the woman's property and half (that) as compensation for supersession, and (pay) a fine of twenty-four panas maximum.

(*injury*).

वाक् पारुष्यम् उपवादः कुत्सनमभिभर्त्सनमिति।

Defamation, vilification and threat constitute verbal injury.

शरीर प्रकृति श्रुतवृत्तिजनपदानां शरीरोपवादे काणरवंजादिभिः सत्ये त्रिपणो दण्डः, मिथ्योपवादे षट्पणो दण्डः।

Of (defamation pertaining) body, character, learning, profession and country, in case of defamation pertaining to body, such as one-eyed, lame and so on, the fine is three *paṇas* if (the defect is) a fact ; the fine is six *paṇas* in case of a false imputation (of the defect).

'शोभनाक्षिमन्तः' इति काणरवंजादीनां स्तुतिनिन्दायां द्वादशपणो दण्डः।

In case of censure masquerading as praise of one-eyed, lame and other (persons), such as 'with beautiful eyes', the fine shall be twelve *panas*.

कुष्ठोन्माद क्लैन्ब्यादिभिः कुत्सायां च सत्यमिथ्यास्तुतिनिन्दासु द्वादशपणोत्तरा दण्डास्तुल्येषु। विशिष्टेषु द्विगुणाः, हीनेषु अर्धदण्डाः, परस्त्रीषु द्विगुणाः, प्रमाद मदमोहादिभिरर्धदण्डाः।

And in case of vilification referring to leprosy, madness, impotence and so on, when it is true, false and contains ironical praise, the fines are twelve panas increased by twelve panas successively (in the three cases, if it is) towards equals. If towards superiors the fines shall be double, if towards inferiors half the fines, if towards wives of others double, (but) half the fines if it is due to a mistake, intoxication, delusion and so on.

कुष्ठोन्मादयोश्चिकित्सकाः संनिकृष्टाः प्रमाणम्, क्लीबभावे स्त्रियो मूत्रफेनोऽप्सु विष्टनिमज्जनं च।

Of leprosy and madness, physicians and men staying near are the authority ; of impotency, women, foam on the urine and sinking of ordure in water (shall constitute proof).

काष्ठलोष्टपाषाणलोहदण्डरज्जु द्रव्याणामन्यतमेन दुःखमशोणितमुत्पादयत श्चतुर्विंशति पणो दण्डः, शोणितोत्पादने द्विगुणः, अन्यत्रदुष्ट शोणितात्। मृतकल्पमशोणितं घ्नवतो हस्त पाद पारंचिकं वा कुर्वतः पूवः साहसदण्डः, पाणिपाददन्त भंगे कर्णनासाच्छेदने व्रणविदारणे च, अन्यत्र दुष्टव्रणेभ्यः। सक्थिग्रीवाभंजने नेत्र भेदने वा वाक्य चेष्टा भोजनोपरोधेषु च मध्यमः साहस दण्डः समुत्थान व्ययश्च। विपत्तौ कण्टक शोधनाय नीयेत।

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For one causing hurt without blood with any one of the objects made of wood, earth, stone, or metal, or a stick or rope, the fine shall be twenty-four panas, for causing a bleeding would double, except in the case of impure blood. For one beating (another) to the point of death without causing bleeding, or causing dislocation of the hand or foot, (the punishment shall be) the lowest fine for violence, also for breaking hands, feet or teeth, cutting off the ear or nose and opening up wounds, excepting festering wounds. For breaking the thigh or neck or piercing the eye and in cases of (hurt leading to) obstruction in speech, movement or eating, (the punishment shall be) the middle fine for violence and the expenses for treatment and cure. In case of death, he shall be taken for trial as a criminal by a magistrate.

(*inquest*)

तैलाभ्यक्तमाशु मृतकं परीक्षेत।

He shall examine a (person) dying (just then, or) suddenly, after smearing (the body) with oil.

निष्कीर्ण मूत्र पुरीषं वातपूर्ण कोष्ठत्वक्कं शूनपाद पाणिमुन्मीलिताक्षं सव्यंजनकण्ठं पीडन निरुद्धोच्छ्वास हतं विद्यात्। तमेव संकुचित बाहु सकिथमुद्बन्धहतं विद्यात्।

(One) with urine and ordure thrown out, with the skin of the abdomen filled with wind, with swollen hands and feet, with eyes open, with marks on the throat, he should hold as killed through the stopping of breathing by strangulation. The same, with arms and thighs contracted, he should hold as slain by hanging.

शून पाणिपादोदरमपगताक्षमुद्वृत्तनाभिमवरोपितं विद्यात्।

(One) with hands, feet and abdomen swollen, with eyes sunk in, with the navel turned out, he should hold as impaled.

निस्तब्धगुदाक्षं संदष्टजिह्वमाध्मातोदरमुदकहतं विद्यात्।

(One) with the anus and eyes closed, with the tongue bitten, with the belly swollen, he should hold as dead by (drowning in) water.

शोणितानुसिक्तं भग्नभिन्नगात्रं काष्टैरश्मभिर्वा हतं विद्यात्।

(One) bespattered with blood, with limbs broken or dislocated, he should hold as slain with sticks or stones.

संभग्न स्फुटित गात्रमवक्षिप्तं विद्यात्।

(One) with limbs shattered and burst, he should hold as hurled down (from a height).

श्याव पाणि पाद नखं शिथिल मांसरोम चर्माणं फेनोपदिग्ध मुखं विषहतं विद्यात्। तमेव सशोणित दंशं सर्पकीटहतं विद्यात्।

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(One) with dark hands, feet, teeth and nails, with loose flesh, hair of the body and skin, with the mouth covered with foam, he should hold as killed by poison. The same, with bloody marks of bite, he should hold as killed by a snake or an insect.

विक्षिप्त वस्त्रगात्रमतिवान्तविरिक्तं मदन योगहतं विद्यात्।

(One) with clothes and limbs thrown about, with excessive vomiting and motions, he should hold as killed by a stupefying mixture.

अतोऽन्यतमेन कारणेन हतं हत्वा वा दण्डभयादुद्बद्ध निकृत्तकण्ठं विद्यात्।

He should find out if the (person) is killed in one of these ways, or, if after being killed, he is hanged or has his throat cut, through fear of punishment.

स्वयमादिष्ट पुरुषैर्वा, चोरैरर्थनिमित्तं सादृश्यादन्य वैरि भिर्वा हतस्य घातमासन्नेभ्यः परीक्षेत। येनाहतः सह स्थितः प्रस्थितो हतभूमिमानीतो वा तमनुयुंजीत। ये चास्य हत भूमावसन्न चरा स्तानेकैकशः पृच्छेत् 'केनायमिहानीतो हतो वा, कः सशस्त्रः संगूहमान उद्विग्नो वा युष्माभिर्दृष्टः' इति। ते यथा ब्रूयुस्तथा अनुयुंजीत।

He should investigate, through those proximate, the murder of a (person, whether he is) killed by (some persons) themselves or through agents appointed, or by thieves for the sake of money, or by enemies of some one else because of similarity. He should question him by whom he had been called, with whom he had stayed or gone, or by whom he was brought to the place of murder. And he should question those moving near him at the place of murder, each one separately, 'Who brought him here? Who killed him? Did you see any one with a weapon in hand or hiding himself or agitated?' As they might reply, so should he question (further).

अनाथस्य शरीरस्थं उपभोगं परिच्छदम्। वस्त्रं वेषं विभूषां वा दृष्ट्वा तद्व्यवहारिणः।।
अनुयुंजीत संयोगं निवासं वासकारणम्। कर्म च व्यवहारं च ततो मार्गणमाचरेत्।।

Observing the objects used on the person of the helpless (deceased), his belongings, clothes, dress or ornaments, he should question those who deal in those articles, concerning their meeting (with him), their residence, the reason for their stay, their occupation and dealings, and then carry on the investigation.

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17. Topics of Medical Import from a Few General Classics

a. *Upaniṣads*

"From every sentence (of the *upaniṣads*), deep original and sublime thoughts arise, and the whole is pervaded by a high and holy and earnest spirit. In the whole world ... there is no study ... so beneficial and so elevating as that of the *upaniṣads*. They are products of the highest wisdom. They are destined sooner or later to become the faith of the people." Schopenhauer (SR. U.1)

A.N. Whitehead speaks of the real which stands behind and beyond and within the passing flux of this world, 'something which is real and yet waiting to be realised, something which is a remote possibility and yet the greatest of the present facts, something that gives meaning to all that passes, and yet eludes apprehension; something whose possession is the final good, and yet is beyond all reach; something which is the ultimate ideal and the hopeless quest'. Science and the Modern World (1933) p. 238.

1. ईशावास्यमिदं सर्वं यत्किंच जगत्यां जगत्। तेन त्यक्तेन भुंज्जीथा मागृधः कस्य स्विद्धनम्।।
कुर्वन्नेवेह कर्माणि जिजीविषेच्छतगं समाः। एवं त्वयि नान्यथेतोऽस्ति न कर्म लिप्यते नरे।।

Īśa. (*a salutary attitude to life*) The whole of this world, whatever that is transient there, is to be concevied as being inhabited by God. It is by such a spirit of renunciation, one should enjoy it all and should not covet anybody else's wealth. One should desire to live for hundred years equably in this world doing work throughout. If you are of this way and none other, only then, the activities that (you as) a person will do, shall not smear you (with their blemishes and effect). 1,2

यस्मिन् सर्वाणि भूतानि आत्मैवाभूद्विजानतः। तत्र को मोहः कः शोक एकत्वमनुपश्यतः।।

In such a knowledgeable person in whom all the beings have become one's own as it were, what is the (point for) delusion and what is (the need for) grief to such a one who visualises oneness everywhere. 7.

2. केनेषितं पतति प्रेषितं मनः केन प्राणः प्रथमं प्रैति युक्तः। केनेपितां वाचमिमां वदन्ति चक्षुः श्रोत्रं क उ देवो युनक्ति।। श्रोत्रस्य श्रोत्रं मनसो मनो यद्वचो ह वाचँ स उ प्राणस्य प्राणः चक्षुष श्चक्षुरतिमुच्य धीराः प्रेत्यास्माल्लोकादमृता भवन्ति।।

Kena. (*some basic musings*) By whom desired and sent does the mind fall (upon its objects)? By whom employed does life commence to proceed in the very first place? By whom desired does (one) speak these words? Which god it is that employs the eye and the ear? The Ear of the ear, the Mind of the mind and that which is the Word of the word. That indeed is the Life of the life and the Eye of the eye. The courageous persons (who can realise this truth) become immortal crossing this barrier and after departing from this world. 1,2

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न तत्र चक्षुर्गच्छति न वाग्गच्छति नो मनो न विद्मो न विजानीमो यथैतदनु शिष्यादन्यदेव तद्विदितादथो अविदितादधि। इति शुश्रुम पूर्वेषां ये नस्तद् व्याच्चक्षिरे।
यद् वाचानभ्युदितं येन वागभ्युद्यते।
तदेव ब्रह्म त्वं विद्धि नेदं यदिदमुपासते।।

(Our) eye does not reach there, nor does the word or the mind reach there. We did not know it, nor would we know it now, as to how to teach this (Truth) to (one's) disciples. It is something altogether different from what is known and It is something beyond what is unknown. Thus have we heard of it from those who have instructed us (and) by our fore-fathers. What has risen over the words and by whom infact, the word arises, know *That* as Brhma indeed, and not what you worship here. That which thinks by means of the mind and by whom (in fact) mind is called the mind, *That* alone is Brhma and not what you worship here. 3,5.

3. श्रेयश्च प्रेयश्च मनुष्यमेतस्तौ संपरीत्य विविनक्ति धीरः।
श्रेयो हि धीरेऽभिप्रेयसो वृणीते प्रेयो मन्दो योग क्षेमाद्वृणीते।।

Kaṭha. (*the eternal choice*) The auspicious and the (merely) pleasant approach a man. It is only a brave man who carefully analyses between the two and then chooses one between the two separately. The brave chooses the auspicious with full intention while the dull witted chooses the (merely) pleasant because it is just immediately safe to do so. 2.2.

4. सर्वं हिएतद्ब्रह्मायमात्मा ब्रह्म सोऽयमात्मा चतुष्पात्। जागरितस्थानो बहिः प्राज्ञः सप्तांग एकोनविंशति मुखः स्थूलभुग्वैश्वानरः प्रथमः पादः। स्वप्नस्थानोऽन्तः प्रज्ञः सप्तांग एकोनविंशति मुखः प्रविविक्तभुक् तैजसो द्वितीयः पादः। यत्र सुप्तो न कंचन कामं कामयते न कंचन स्वप्नं पश्यति तत्सुषुप्तम्। सुषुप्त स्थान एकीभूतः प्रज्ञानघन एवानन्दमयो ह्यानन्द भुक् चेतो मुखः प्राज्ञ स्तृतीयः पादः। एष सर्वेश्वर एष सर्वज्ञ एषोऽन्तर्याम्येष योनिः सर्वस्य प्रभवाप्ययौ हि भूतानाम्। नान्तः प्रज्ञं, न बहिः प्रज्ञं नोभयतः प्रज्ञं न प्रज्ञानघनं न प्रज्ञं नाप्रज्ञम्। अदृष्टमव्यवहार्यमग्राह्यमलक्षणमचिन्त्य मव्यपदेश्यमेकात्म प्रत्यय सारं प्रपंचोपशमं शान्तं शिवमद्वैतं चतुर्थं मन्यन्ते स आत्मा स विज्ञेयः।

Māṇḍūkya. (*ātma darśana - visualising soul*) Whatever is all this, That is Brhma. This self or Atma is Brhma and this Atma is four-footed (i.e. consists of four basic factors). (In) its state of wakefulness, It is attentive and wise towards the external world, seven organed, ninteen faced, a fire that lives (lit. consumes) on the gross; (this is its) first foot. (In its) state of dream It is attentive and wise towards the internal world, seven organed, nineteen faced, a lustre that lives (lit. consumes) on intense analysis (introspective analysis?); (this is its) second foot. When asleep and does not lust for any desire, or see any dreams, this is its (state of) *suṣupti*, deep sleep. When the state of sleep is unified, it is a state of concentrated (lit. solidified) wisdom, itself; (then, it is) blissful and lives in (lit. consumes) bliss (and) animation-faced and wise; (it is the) third foot. This is the lord of everything; this, the Omniscient; This, the Inner Mover, This, the womb of everything and the origin of the beings indeed. ... Neither wise inwards, nor wise outwards, or wise either way, neither the concentrated wisdom, nor wisdom or non wisdom, invisible, non-dealable, non-graspable, with no characteristics whatsoever, unthinkable, unexceptionable, the essence of single minded reason, the quietus of the world, the peaceful, the sacred, the non-dual is considered to be the - fourth foot of the Atma. This is what ought to be known. 2-7.

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5. वेदमनूच्याचार्योऽन्ते वासिनमनु शास्ति। सत्यं वद। धर्मं चर। स्वाध्यायान्मा प्रमदः। आचार्याय प्रियं धनमाहृत्य प्रजातन्तुं मा व्यवच्छेत्सीः। सत्यान्न प्रमदितव्यम्। धर्मान्न प्रमदितव्यम्। कुशलान्न प्रमदितव्यम्। भूत्यै न प्रमदितव्यम्। स्वाध्याय प्रवचनाभ्यां न प्रमदितव्यम्। देवपितृकार्याभ्यां न प्रमदितव्यम्। मातृ देवो भव। पितृ देवो भव। आचार्यदेवो भव। अतिथि देवो भव। यान्यनवद्यानि कर्माणि। तानि सेवितव्यानि। नो इतराणि। यान्यस्माक सुचरितानि। तानि त्वयोपास्यानि। नो इतराणि। ये केचास्मच्छ्रेयांसो ब्राह्मणाः। तेषां त्वयाऽऽसने न प्रश्वसितव्यम्। श्रद्धया देयम्। अश्रद्धया देयम्। श्रिया देयम्। ह्रिया देयम्। भिया देयम्। संविदा देयम्। अथ यदि ते कर्मचिकित्सा वा वृत्तविचिकित्सा वा स्यात्। ये तत्र ब्राह्मणाः संमर्शिनः। युक्ता आयुक्ताः। अलूक्षा धर्मकामाः स्युः। यथा ते तेषु वर्तेरन्। तथा तेषु वर्तेथाः।

एष आदेशः। एष उपदेशः। एषा वेदोपनिषत्।

एतदनुशासनम्। एवमुपासितव्यम्। एवमु चैतदुपास्यम्।

Taittiriya. (*a vedic convocatory address*) After (fully) completing the teaching of the vedas, the preceptor ordains the disciple (as follows). "Tell truth. Follow *dharma* . Do not err from your self-study. Having given the money as loved by your teacher (at the completion of study) do not desire to cut the family line (i.e. take to a householder's life and procreate). You should not transgress from the path of truth. You should not transgress from the path of *dharma* . You should not transgress from the path of prosperity. You should not transgress from the path of welfare. You should not transgress from the path of self-study and teaching others. You should not transgress from the path of your ritualistic duites towards the gods and the manes. Consider mother as your god. Consider father as your god. Consider the preceptor as your god. Consider the guest as your god. Whatever works that are unblameable, you should practise them and not the others. Whatever that are of good conduct in us, you should practice them and not the others. Whoever are the *brāhmins* who are greater than us, honour them with proper seat. (When you give gifts), give with faith; do not give with lack of faith; give with glory; give with modesty; give with appreciation; give with perception and feeling. And, in case you get any doubt or uncertainty in matters of work and conduct, whatever *brāhmins* are there (under the circumstances) who can scrutinise well, those who are proper (in themselves because of their virtues) and those that are designated (lit. enjoined by an authority or the society), are soft (hearted) and desirous of *dharma* - you should behave then, as these persons would do.

This is the commandment. This is the teaching. This is what constitutes the *vedas* and the *upaniṣats*. This is the disciplinary injunction. This is what has to be attended to. 1.11.

6. संज्ञानमाज्ञानं विज्ञानं प्रज्ञानं मेधा इष्टिर्धृतिर्मतिर्मनीषा जूतिः स्मृतिः संकल्पः क्रतु रसुः कामो वश इति सर्वाणि एतानि प्रज्ञानस्य नामधेयानि भवन्ति।

Aitareya. (facts of intelligence) (Mere) consciousness, (active) understanding and perception, specialised or a proficient knowledge (of a subject), wisdom and prudence, brilliant intellect, seeking after and desire, resoluteness or will, intention, reflection, impulsivity, memory, conceptualisation, inspiration and enlightenment, life, lusting and taking possession of - all of these constitute the (different) namings of wisdom. 3.2

7. अन्यत्रमना अभूवं ना श्रौषमिति मनसा हि एव पश्यति मनसा श्रुणोति। कामः संकल्पो विचिकित्सा श्रद्धाऽश्रद्धा धृतिर धृतिर्ही धीर्भीरित्येतत्सर्वं मन एव।

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Bṛhadāraṇyaka. (*mind*) If the mind is elsewhere, there is no seeing, if the mind is elsewhere, there is no hearing. Therefore it is that one sees only through the mind, hears only through the mind. Desire, conceptualisation, doubting and uncertainty, faith and lack of faith, resoluteness and lack of resoluteness, modesty, intellect and fear – all of these are mind only. 1.5.3.

8. मनो हि द्विविधं प्रोक्तं शुद्धं चाशुद्धमेव च। अशुद्धं कामसंकल्पं शुद्धं कामविवर्जितम्। मन एव मनुष्याणाम् कारणं बन्धमोक्षयोः। बन्धाय विषयासक्तं मुक्त्यै निर्विषयं स्मृतम्। यतो निर्विषयस्य अस्य मनसो मुक्तिरिष्यते। तस्मान्निर्विषयं नित्यं मनः कार्यं मुमुक्षणा।। निरस्त विषयासंग संनिरुद्धं मनो हृदि। यदा यात्युन्मनी भावं तदा तत्परमं पदम्। तावदेव निरोद्धव्यं यावत् हृदि गतं क्षयम्। एतत् ज्ञानं च मोक्षं च अतेऽन्यो ग्रन्थ विस्तरः।

Bṛhamabindu . *(elevation of mind)* Mind is said to be of two kinds, pure and again impure. Impure mind is conceptualisation with desire. Pure mind is what shuns of desires. It is the mind alone that is the reason for bondage as well as liberation for men. Indulgence in sensualities is considered to be bondage and objectlessness, the liberation. Since mind desires liberation when it is thus objectless, it is therefore that one desirous of liberation should always bring about an objectlessness of the mind. When the mind, bereft of indulgence in sensuality and is stationed firmly in the heart (and) gets into an upward inclination, then, *that*, is the supreme state. One should block it up then itself when the mind has thus entered the heart and undergone a dissolution; *this* is knowledge, *this* is liberation; the rest is all mere expansion of the book. 1.5.

9. ऋतुकाले संप्रयोगादेकरात्रोषितं कललं भवति। सप्तरात्रोषितं बुब्दुदं भवति। अर्धमासाभ्यन्तरे पिण्डो भवति। मासाभ्यन्तरे कठिनो भवति। मास द्व्येन शिरः संपद्यते। मासत्रयेण पाद प्रदेशो भवति। अथ चतुर्थे मासे गुल्फ जठर कटि प्रदेशा भवन्ति। पंचमे मासे पृष्टवंशो भवति। षष्ठे मासे मुखनासिकाक्षिश्रोत्राणि भवन्ति। सप्तमे मासे जीवेन संयुक्तो भवति। अष्टमे मासे सर्वलक्षणसंपूर्णो भवति। पितू रेतोऽतिरेकात्पुरुषो मातू रेतोऽतिरेका स्त्री उभयोर्बीज तुल्यत्वान्नपुंसको भवति। व्याकुलितमनसोऽन्धाः खंजाः कुब्जा वामना भवन्ति। अन्योन्य वायु परिपीडित शुक्र द्वैविध्यात्तनु स्यात्तो युग्माः प्रजायन्ते...अथ नवमे मासि सर्वलक्षण ज्ञान करण संपूर्णो भवति।

Garbha . *(development of the foetus)* Because of being harnessed (lit. yoked) together (of the sperm and the female counterpart) at the time of menstruation, (the embryo or the *bhrūṇa*) after sleeping over the night becomes a small mucilaginous round, *kalala*; after sleeping over seven night becomes a bubble; after an interval of half a month becomes a solid ball; after an interval of a month becomes hard; by two months head gets formed; by three months the leg region gets formed; and in the fourth month, the regions of the ankle, the stomach and the hip get formed; in the fifth month arises the mid-rib; in the sixth month, the face, the nose, the eyes and the ears come about; in the seventh month it gets associated with conscious activity (lit. life viz., moving about of the limbs within the womb)(and) in the eighth month it gets endowed with all the characteristics. If the father's contribution (lit. sperm) is more the embryo becomes male, if mother's (contribution) is more, a female; if there is an equality among the contributions (lit. *bīja*, seed) of both, a neutral. If (the mother, at the time of pregnancy) has a disturbed mind, it becomes blind, lame, dwarf or very abbreviated. If it becomes small, because of a duality among the sperms mutually pressing around each other, then twins get born.....And in the ninth month it becomes complete with all characteristics, knowledge and capabilities. Garbha. 3

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10. उत्तमा तत्वचिन्तैव मध्यमं शास्त्र चिन्तनम्। अधमा मन्त्रचिन्ता च तीर्थभ्रान्त्यधमाधमा। अनुभूतिं विना मूढो वृथा ब्रह्मणि मोदते। प्रतिबिम्बित शाखाग्र फलास्वादन मोदवत्।।

Maitreyi . (*gradation in the basic values*) Best is the contemplation upon the principles. Of medium merit, is the contemplation upon the sacred Texts. Of lowest merit is the contemplation upon the (mere words and the) incantations. The illusion of (securing merit) by pilgrimages is the lowest of the low. The fool who takes delight in Brhma uselessly without experiencing it personally - his delight is like the delight of a person who tastes the fruit at the tip of a branch, as it gets reflected (in a mirror). 2.21, 22

11. यत्किंचिदपि संकल्प स्तापत्रयमितीरितम्। कामं क्रोधं बन्धनं सर्वदुःखं विश्वं दोषं कालनानास्वरूपम्। यत्किंचेदं सर्व संकल्पजालं तत्किंचेदं मानसं सोम्य विद्धि। मन एव जगत्सर्वं मन एव महारिपुः। मन एव हि संसारो मन एव जगत् त्रयम्। मन एव महद्दुःखं मन एव जरादिकम्। मन एव हि कालश्च मन एव मलं तथा।

Tejobindu (*all comprehensiveness of the mental view*) Whatever conceptualisation there is, and whatever that is considered as a triad of afflictions, the lust, the anger, the bondage, the whole of grief, the entirety of the world, the blemishes, the time and the myriads of forms that confront one over time, whatever all is there, of this network of concepts, every one of these, O gentle one, know them (all) as purely mental. Mind alone is this mundanity and mind alone, the three worlds. Mind alone is the great grief and mind alone, the old age and the like. Mind alone is the time and mind alone, the impurity. 5.17-19.

12. काम क्रोधभयं चापि मोह लोभमदो रजः। जन्म मृत्युश्च कार्पण्यं शोकस्तन्द्रा क्षुधा तृषा।। तृष्णा लज्जा भयं दुःखं विषादो हर्ष एव च। एभिर्दोषैर्विनिर्मुक्तः स जीवः केवलो मतः।। तस्मात् दोष विनाशार्थमुपायं कथयामि ते। योगहीनं कथं ज्ञानं मोक्षदं भवति ध्रुवम्।। योगो हि ज्ञान हीनस्तु न क्षमो मोक्षकर्मणि। तस्मात् ज्ञानं च योगं च मुमुक्षुर्दृढमभ्यसेत्।।

Yogatatva . (*yoga*) Lust, anger, fear and again infatuation, greed, arrogance and passion (*rajas*), birth and death, miserliness, grief, lassitude, hunger, thirst hankering, shame, fear, grief, dejection and again delight - he who is liberated from these blemishes, he alone is considered the absolute living being. Therefore I shall tell you the means of destroying these blemishes. How can a knowledge without *yoga* become a sure and constant means of securing liberation ? An yoga without knowledge is inadequate in the business of securing liberation (moksa). Therefore one who desires liberation should again and again steadily practice knowledge as well as *yoga*. 13-15.

13. स्वल्पापि दीपकणिका बहुलं नाशयेत् तमः। स्वल्पोऽपि बोधो निबिडं बहुलं नाशयेत् तमः।।

Ātmabodha (*value of knowledge*) A particle of light, even though very little will destroy darkness. An awakening (into reality) even though small, will destory a plenty of dense darkness. Atmaprabhodha 28.

14. धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रियनिग्रहः। धीर्विद्या सत्यमक्रोधो दशकं धर्मलक्षणम्।।

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Nārada parivrājaka . (*characteristics of dharma*) Resoluteness, forbearance, restraint, non-stealing, cleanliness, control of the senses, intellect, learning, truth and absence of anger – these are the ten characteristics of Dharma. Nāradaparivrājaka 3.24

15. तद् ब्रह्म तापत्रयातीतं षट्कोशविनिर्मुक्तं षड्भिर्वर्जितं पंचकोशातीतं षड् भाव विकारशून्यं एवमादि सर्वविलक्षणं भवति। तापत्रयं त्वाध्यात्मिकाधिभौतिकाधिदैविकं कर्तृकर्मकार्य ज्ञातृ ज्ञान ज्ञेय भोक्तृभोग भोग्यमिति त्रिविधम्। त्वङ् भांस शोणितास्थिस्नायुमज्जाः षट्कोशाः। काम क्रोध लोभमोहमदमात्सर्यमिति अरिषड्वर्गः। अन्नमय प्राणमय मनोमय विज्ञानमयानन्दमया इति पंच कोशाः। प्रियात्मजनन वर्धन परिणामक्षय नाशाः षड्मयः। कुल गोत्र जाति वर्णाश्रम रुपाणि षड् भ्रमाः। एतद् योगेन परम पुरुषो जीवो भवति नान्यः।

Mudgala . (*Brhma and the body*) Brahma is that which is beyond the three afflictions, freed from the six sheaths, excluded from the six waves (of existence), beyond the sheaths, devoid of the six aberrations of sentiments, (and is) of such and other extraordinary characteristics. The three afflictions are those proceeding from the self, one's physical person and from the influence of the spirits or the gods or (the distinctions of) three kinds such as the agent, the doing and the work or the knower, the knowledge and the knowable or the enjoyer, the enjoyment and the enjoyable. What is made up of food or materiality, or of life, i.e. vital, or of mind, or of specialised knowledge or of bliss – these are the five sheaths. What is likeable, or of interest, prospering, effecting, decline and loss – these are the six (aberrations of) sentiments. Eating, thirst, grief, infatuation, old age and death – these are the six waves of existence. Family, cohort, caste, colour, *āsrama* and physical beauty – these are the six illusions. It is because of the association of these things the Absolute God becomes an individual human being and nothing else. 4.

16. शाण्डिल्यो ह वा अथर्वाणं पप्रच्छात्मलाभोपाय भूतमष्टांङ्गयोगमनु ब्रूहीति। स होवाचाथर्वा यमनियमासन-प्राणायामप्रत्याहार धारणाध्यान समाधयोऽष्टांगानि। तत्र दश यमाः। तथा नियमाः। आसनान्यष्टौ। त्रयः प्राणायामाः। पंच प्रत्याहाराः। तथा धारणा। द्विप्रकारं ध्यानम्। समाधिस्त्वेक रूपः। तत्राहिंसासत्यास्तेय ब्रहमचर्यदयार्जवक्षमाधृतिमिताहार शौचानि चेति यमा दश। तत्र हिंसा नाम मनोवाक्कायकर्मभिः सर्वभूतेषु सर्वदाक्लेशजननम्। सत्यं नाम मनो वाक्काय कर्मभिर्भूत हितयथार्थाभिभाषणम्। अस्तेयं नाम मनो वाक्काय कर्मभिः परद्रव्येषु निःस्पृहता। ब्रह्मचर्यं नाम सर्वावस्थासु मनो वाक्काय कर्मभिः सर्वत्र मैथुनत्यागः। दया नाम सर्वभूतेषु सर्वत्रानुग्रहः। आर्जवं नाम मनोवाक्काय कर्मणां विहितावहितेषु जनेषु प्रवृत्तौ निवृत्तौ वा एक रूपत्वम्। क्षमा नाम प्रियाप्रियेषु सर्वेषु ताडनपूजनेषु सहनम्। धृतिर्नामार्थहानौ स्वेष्टबन्धुवियोगे तत्प्राप्तौ सर्वत्र चेतः स्थापनम्। मिताहारो नाम चतुर्थांशावशेषक सुस्निग्धमधुराहारः। शौचं नाम द्विविधं बाह्यमान्तरं चेति। तत्र मृज्जलाभ्यां बाह्यम्। मनः शुद्धिरान्तरम्। तदाध्यात्मविद्यया लभ्यम्।

तपः सन्तोषास्तिक्य दानेश्वरपूजनसिद्धान्त श्रवणह्रीमतिजपो व्रतानि दश नियमाः।

Śāṇḍilya. (*the components of yoga*) Śaṇḍilya asked Atharva "Please tell me the yoga of the eight limbs which constitutes the means for securing profit to oneself " Atharva said "*Yama, niyama, āsana, prāṇāyāma, pratyāhāra, dhāraṇa, dhyāna* and *samadhi* are the eight limbs. There, ten are the restraints; (of) similar (number) are the rules. The postures of the body are eight. Three are the *praṇāyāmas* . Five, the *pratyāhārās* ; (of) similar (number are) the *dharanas* ; of two types, the meditation; but *samādhi* however is of one single form. Therein, non-violence, truth, nonstealing, celibacy, compassion, uprightness, forbearance, resoluteness, limited food and cleanliness – these are the ten restraints (*yamas*).

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Therein, violence means to always create distress to all beings by means of (one's) mind, speech, body and action. Non-stealing means non-desire of what belongs to others by means of (one's) mind, speech, body and action. Celibacy means the abandonment of cohabitation every where and in all stages by means of (one's) mind, speech, body and action. Compassion means gracefulness and favouring towards all beings everywhere. Uprightness means being of the same form towards people whether they are engaged or not doing at all in what are prescribed or are not prescribed-in mind, speech, body and actions. Forbearance is tolerance of being beaten or worshipped in all likeable or unlikeable (circumstances). Resoluteness is to keep oneself unperturbed in case of loss of money, (either in) separation from one's relatives, whom one likes, or in securing them; (and to do so) everywhere. Limited food means eating good, unctuous and sweet food with one fourth of the stomach capacity empty. Cleanliness is of two types, external and internal. (Cleaning) by mud and water, is external cleaning; purity of mind is internal cleaning and this is obtainable by that learning which proceeds from a knowledge of the self.

Penance, joyfulness, faith, giving gifts, worshipping god, listening to discourses, bashfulness, inclination towards repeated hummings of sacred syllables and keeping religious vows - these are the ten rules (*niyama*). 1,2

17. दर्शनं स्पर्शनं केलिः कीर्तनं गुह्य भाषणम्। संकल्पोऽध्यवसायश्च क्रियानिवृत्तिरेव च।। एतन्मैथुनमष्टांगं प्रवदन्ति मनीषिणः।

Katharudra . (*cohabitation*) Seeing, touching, sporting, narrating, conversation in secrecy, conception, mental effort, the act and the cessation from the act - the wise speak these to be the ten limbs of cohabitation. 5,6

18. भारो विवेकिनः शास्त्रं भारो ज्ञानं च रागिणः। अशान्तस्य मनो भारो भारोऽनात्मविदो वपुः।।

Maha . (*the burdens of life*) Treatises are a burden to the wise and the discriminative (for, they can make out the meaning without any ritualistic reference to the treatises). Knowledge is a burden to the passionate and the interested (as, it pricks them, otherwise). For a person without peace (within), his very) mind is a burden. For a person who does not know what is soul, (his) body (itself) is a burden. 3.15.

b. *Mahābhārata*

19. आहूताध्यायी गुरुकर्मसु अचोद्यः, पूर्वोत्थायी चरमं चोपशायी।
मृदुर्दान्तो धृतिमानप्रमत्तः, स्वाध्याय शीलः सिध्यति ब्रह्मचारी।।
धर्मागतं प्राप्य धनं यजेत, दद्यात् सदेवातिथीन् भोजयेच्च।
अनाददानश्च परैरदत्तं सैषा गृहस्थोपनिषत् पुराणी।।
स्ववीर्यजीवी वृजिनान्निवृत्तो, दाता परेभ्यो न परोपतापी।
तादृङ् मुनिः सिद्धिमुपैति मुख्यां वसन्नरण्ये नियताहारचेष्टः।।
अशिल्प जीवी गुणवांश्चैव नित्यं जितेन्द्रियः सर्वतो विप्रयुक्तः।
अनेक शायी लघुरल्पप्रचारश्चरन् देशानेकचरः स भिक्षुः।
रात्र्या यथा वाभिजिताश्च लोका भवन्ति कामाभिजिताः सुखाश्च।
ताभेव रात्रिं प्रयतेत विद्धानरण्य संस्थो भवितुं यतात्मा।।
दशैव पूर्वान् दश चापरांश्च ज्ञातीनथात्मानमथैकविंशम्।
अरण्यवासी सुकृते दधाति विमुच्यारण्ये स्व शारीर धातून्।।

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(i) *(social health - organisation of asramas)* An invited student; not needing to be goaded in matters concerning his preceptor; getting up from sleep before all others and going to bed long after all others have slept; soft and mild; restrained; resolute; ever alert and habitually intent on his selfstudy - it is such a celibate (student) who succeeds (well) (in his celibate stage of life or āśrama).

He should offer in sacrifice the money he has earned by righteous means. He should be giving gifts always and feed the guests. He should never receive what has not been offered by others. This is the ancient and the secret doctrine for (the *āśrama* of) the house-holder.

Carrying out his livelihood by his own prowess; turning away from wicked ways; a giver (of gifts and benefits) to others; never irritating or disturbing to others - it is such a sage who will attain success (in his *vānaprastha āśrama* or forest life) residing mainly in the forest with his food and activities, both limited.

Carrying out his livelihood not by (performing) any special craft towards the purpose, full of good qualiities; his senses always under control; unattached in all ways and on all grounds; sleeping not in any house; light hearted and wandering little; moving about from place to place and going to any particular place only once - he is a mendicant.

In any night when he feels he has conquered the worlds and his desires as well as happinesses have also become conquered, in that night itself, the learned person should take efforts to get stationed in the forest (viz. take up the *vānaprastha* stage of life) by keeping his self under control.

Such a dweller of the forest (in his last *āśrama* of the *vānaprastha*) by leaving his bodily elements in the forest sustains by his religious merits ten generations earlier and ten generations later, and his own relatives of thirty one generations. Adi. 91.2-7

20. इत्युक्त्वा स नृपः शोचन् निषसाद महीतले। तमध्यात्मरतो विद्वान् शौनको नाम वै द्विजः।
योगे सांख्ये च कुशलो राजानं इदमब्रवीत्।

(ii) (*management of life - mental poise and health*) Thus saying, that king (*Yudhiṣṭhira*) sat down on the ground, grieving. A learned *brāhmin* by name Saunaka, who would take delight in (matters concerning) Supreme Spirit, an expert in the philosophcial points of view of Yoga as well as Sankhya, told him thus :

शोकस्थान सहस्राणि भय स्थान शतनि च। दिवसे दिवसे मूढमाविशन्ति न पण्डितम्।।...
अष्टांग बुद्धिमाहुर्यां सर्वाश्रेयोऽभिघातिनीम्। श्रुतिस्मृतिसमायुक्तां राजन् सा त्वय्यवस्थिता।...
शारीरमानसैर्दुःखैर्न सीदन्ति भवद्विधाः।। श्रूयतां चाभिधास्यामि जनकेन यथा पुरा।
आत्म व्यवस्थान करा गीताः श्लोका महात्मना।

A thousand situations of grief and a hundred situations of fear assail a stupid fool and not a learned scholar, each and every day.....What they speak of as an intellect of eight components which would drive away all that is inauspicious and unfortunate and (that which is) furnished with the knowledge of *sruti* and *smṛti* - that stays established in you.....A man of your nature should not therefore sink down in despondency from griefs of the body and the mind. Listen. I shall tell you the songs and the verses meant to arrange and steady oneself as was done by Janaka in the past.

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मनोदेह समुत्थाभ्यां दुःखाभ्यामर्दितं जगत्। तयोर्व्यास समासाभ्यां शमोपाय मिमंश्रृणु।।

This (whole) world is afflicted with griefs born in the body and the mind. Listen to this means of quietening them down in all their detail and connectivity.

व्याधेरनिष्टसंस्पर्शात् श्रमादिष्ट विवर्जनात्। दुःखं चतुर्भिः शारीरं कारणैः सम्प्रवर्तते।।
तदा तत्प्रतिकाराच्च सततं चाविचिन्तनात्। आधिव्याधिप्रशमनं क्रियायोगद्व्येन तु।।
मतिमन्तो ह्यतो वैद्याः शमं प्रागेव कुर्वते। मानसस्य प्रियाख्यानैः सम्भोगोपनयैर्नृणाम्।।
मानसेन हि दुःखेन शरीरमुपतप्यते। अयः पिण्डेन तप्तेन कुम्भसंस्थमिवोदकम्।।
मानसं शमयेत् तस्मात् ज्ञानेन अग्निमिवाम्बुना। प्रशान्ते मानसे ह्यस्य शारीरमुप शाम्यति।।
मनसो दुःख मूलं तु स्नेह इत्युपलभ्यते। स्नेहात् तु सज्जते जन्तुः दुःखयोगमुपैति च।।
स्नेहमूलानि दुःखानि स्नेहजानि भयानि च। शोक हर्षौ तथाऽऽयासः सर्वं स्नेहात् प्रवर्तते।।
स्नेहात् भावोऽनुरागश्च प्रजज्ञे विषये तथा। अश्रेयस्कावुभावेतौ पूर्वस्तत्र गुरुः स्मृतः।।
कोठराग्निर्यथाशेषं समूलं पादपं दहेत्। धर्मार्थौ तु तथाल्पोऽपि रागदोषो विनाशयेत्।।

The grief of the body commences from four reasons : diseases, contacts with things that one dislikes, fatigue and avoidance of things that one likes. Then, the alleviation of the mental agony and the disease is to be carried out by two kinds of activities - active counteracting and constantly not thinking about it. Wise physicians would therefore carry out an alleviation beforehand itself, for the mental afflictions of people by pleasing narrations, allowing the actual enjoyment or bringing near the objects of enjoyment. From the grief of the mind the body gets tormented just like water in a pot by a ball of iron made red-hot. One should alleviate the mental agitaiton by (offering the sufferer) the right knowledge (of the situation) as one quietens fire by water. When the mind becomes calm, his body (also) gets quietened down. Mind is the source of the grief. (For doing this, it) takes recourse and support from what is called attachment. It is by attachment that a person becomes prepared and secures the coming in of grief. Griefs have attachment as their source and fears arise out of attachment. Sadness and delight, and also fatigue - all issue forth because of attachment. It is by attachment there are produced feelings and passions towards objects. Both are illboding, the former being considered weightier of the two. As a fire within a hole burns up the whole tree from the very roots and with no residue whatsoever, so does the blemish of the passion, even if little, destroys both religious merit and wealth.....

रागाभिभूतः पुरुषः कामेन परिकृष्यते। इच्छा संजायते तस्य ततस्तृष्णा विवर्धति।
तृष्णाहि सर्व पापिष्ठा नित्योद्वेगकरी स्मृता। अधर्म बहुला चैव घोग पापानुबन्धिनी।
या दुस्त्यजा दुर्मतिभिर्या न जीर्यति जीर्यतः। योऽसौ प्राणान्तिको रोगस्तां तृष्णां त्यजतः सुखम्।।

A person overcome by passion gets dragged down by lust. Then arises in him a desire. Thenceforth his thirst prospers. It is this avidity that commits all sins, considered ever excitative, filled with a plentiful of *adharma*, terrible and accompanied with sin. Giving up this thirst, a fatal disease, is happiness, this thirst which is difficult to be given up by the wicked minded, which does not get lessened even though the person having it gets disintegrated.....

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राजतः सलिलादग्ने श्चोरतः स्वजनादपि। भयमर्थवतां नित्यं मृत्योः प्राणभृतामिवा।।
यथा ह्यामिषमाकाशे पक्षिभिः श्वापदै र्भुवि। भक्ष्यते सलिले मत्स्यैस्तथा सर्वत्र वित्तवान्।।
अर्थ एव हि केषांचिदनर्थं भजते नृणाम्। अर्थश्रेयसि चासक्तो न श्रेयो विन्दते नरः।।
तस्मादर्थागमाः सर्वे मनोमोहविवर्धनाः। कार्पण्यं दर्पमानौ च भयमुद्वेग एव च।।
अर्थजानि विदुः प्राज्ञा दुःखान्येतानि देहिनाम्। अर्थस्योत्पादने चैव पालने च तथा क्षये।।
सहन्ति च महद् दुःखं घ्नन्ति चैव अर्थकारणात्।

For a man of money there is a constant threat just like the threat of death to the living, a threat from the king, the waters, the fire, the thief or even from his own relatives. As a piece of flesh gets eaten by birds (when it is) in the sky, by a beast of prey when on the earth and by the fish when in water, so is a man of wealth getting eaten up everywhere. It is the money alone that becomes the reason for purposelessness to some men. A person intent on money will not attain any prosperity. Therefore, all the comings in of the wealth are the promoters of the infatuation of the mind, miserliness, arrogance and prestige as well as fear and excitation. The wise know that these are unhappinesses to people born due to money. (People) bear great unhappiness in producing wealth, protecting it as well as when it gets lost. They get destroyed by the reasons of money alone.....

असंतोषपरा मूढाः संतोषं यान्ति पण्डिताः।। अन्तो नास्ति पिपासायाः संतोषः परमं सुखम्।
तस्मात् संतोषमेवेह परं पश्यन्ति पण्डिताः।। अनित्यं यौवनं रूपं जीवितं रत्न संचयः।
ऐश्वर्यं प्रियसंवासो गृध्येत् तत्र न पण्डितः।।

Fools are always intent on discontentment, (while) it is the learned scholars that secure contentment. There is no end for thirst and hankerings. And contentment is the greatest of the happinesses. That is why, the learned consider that contentment alone is great in this world. Non eternal are the youth, the beauty, the life, the heaping up of the gems, wealth, and dwelling together with those whom one likes. The learned should never greedily strive after them. Vana. 2.20-47.

21. क्रुद्धः पापं नरः कुर्यात् क्रुद्धो हन्याद् गुरुनपि। क्रुद्धः परुषया वाचा श्रेयसोऽप्यवमन्यते।।
वाच्यावाच्ये हि कुपितो न प्रजानाति कर्हिचित्। नाकार्यमस्ति क्रुद्धस्य नावाच्यं विद्यते तथा।।

(*anger and forgiveness*) An angry man will commit sin and would kill even his preceptors. He would deride even the auspicious (persons) by means (of his) harsh words. Once angered he will never know what to talk and what not to talk. There is nothing that an angry man would not do and similarly nothing that he would not say. Vanaparva. 29.4,5.

आत्मानं च परांश्चैव त्रायते महतो भयात्। क्रुध्यन्तमप्रतिक्रुध्यन् द्वयोरेष चिकित्सकः।।

One who does not get angry in return to an angered person, is a physician (as it were) to both (viz., himself as well as the angered person), for he thereby protects himself as well as his opposite member from great calamity. Vanaparva. 29.9

22. नाहं कर्मफलान्वेषी राजपुत्रि चराम्युता ददामि देयमित्येव यजै यष्टव्यमित्युत।।
अस्तु वात्र फलं मा वा कर्तव्यं पुरुषेण यत्। गृहे वा वसता कृष्णे यथाशक्ति करोमि तत्।।

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धर्मं चरामि सुश्रोणि न धर्म फलकारणात्। आगमान्तनतिक्रम्य सतां वृत्तमवेक्ष्य च।।
धर्म एव मनः कृष्णे स्वभावाच्चैव मे धृतम्। धर्मवाणिज्यको हीनो जघन्यो धर्मवादिनाम्।।
न धर्म फलमाप्नोति यो धर्मं दोग्धुमिच्छति। यश्चैनं शंकते कृत्वा नास्तिक्यात् पापचेतनः।।
अतिवादाद् वदाम्येष मा धर्ममभिशंकिथाः। धर्माभिशंकी पुरुषस्तिर्यग्गति परायणः।

(*attitude to dharma*) I definitely do not carry out my *dharma*, O princess, with an intent on the fruit thereof. I give (gifts) because it is to be given. I do the oblation, because it is to be done. Let there be fruit for me by this or not; what happens to be the duty for a person, whether I am living in the house or not, I shall do it as far as it lies in my power. I carry out my *dharma,* not for the reason of the benefit I would secure thereby. Not transgressing the ancient tradition, having seen the ways of living of the good people and because of my own habit, Draupadi, I have kept my mind firmly in *dharma* alone. Lowly is he who makes *dharma* a trade. Despicable is he who merely talks and argues about *dharma*. He who desires to milk from *dharma* (as if it is a cow) would not secure the fruit of *dharma*. Whoever who doubts the (value of) *dharma* after corrupting it out - either because of his lack of faith and atheism, or by too much argumentation - I would like to tell him - please do not doubt the value of *dharma*. A person doubting the *dharma* is sure to go to the ways of the lowly animals. Vanaparva 31.2-8.

23. येषां तटाकानि महोदकानि वाप्यश्च कूपाश्च प्रतिश्रयाश्च।
अन्नस्य दानं मधुरा च वाणी यमस्य ते निर्वचना भवन्ति।।
धान्यं श्रमेणार्जित वित्तसंचितं विप्रे सुशीले च प्रयच्छते यः।
वसुन्धरा तस्य भवेत् सुतुष्टा धारां वसूनां प्रति मुंचतीव।।
अन्नदाः प्रथमं यान्ति सत्यवाक् तदनन्तरम्। अयाचित प्रदाता च सभं यान्ति त्रयो जनाः।।

(iii) (*giving gifts - public service*) Those who have (to their credit, the merit of having constructed) tanks of plentiful waters, reservoirs of water by damming up, wells and asylums; also a gifting of food; a sweet tongue; -the god of Death will become speechless in front of them. He who gives grains and wealth earned by his own effort to a *brāhmin* of good conduct - the Mother Earth, the giver of all prosperity, will become well pleased with him as if he is letting loose an unhindered flow of prosperity (to others, just as she herself does). First goes ahead the giver of food. Then (comes) the speaker of truth. The person who gives gifts unasked (follows then only). All the three (however) go parallel (i.e. are of comparable merit) among themselves. Vanaparva. 200.40-42.

24. मनो विसृजते भावं बुद्धिरध्यवसायिनी। हृदयं प्रियाप्रिये वेद त्रिविधा कर्म चोदना।।

(iv) (*components of mental activity*) Mind sets forth feelings, opinions and intentions. Intellect carries them out and accomplishes. Heart knows what is pleasant and upleasant (in all this). The goading for its (i.e.mind's) activity is thus three fold.

इन्द्रियेभ्यः पराह्यर्था अर्थेभ्यः परमं मनः। मनसस्तु परा बुद्धिः बुद्धेरात्मा परो मतः।।

Meanings are greater than the sensory organs. Mind is greater than the meanings. Intellect is greater than mind. Soul is considered to be greater still than mind.

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बुद्धिरात्मामनुष्यस्य बुद्धिरेवात्मनाऽऽत्मनि। यदा विकुरुते भावं तदा भवति सा मनः।।
इन्द्रियाणां पृथग्भावाद् बुद्धिर्विक्रियते ह्यतः। श्रृण्वती भवति श्रोत्रं स्पृशती स्पर्श उच्यते।।
पश्यती भवते दृष्टी रसती रसनं भवेत्। जिघ्रती भवति घ्राण बुद्धि विक्रियते पृथक्।।
इन्द्रियाणि तान्याहुः तेषु अदृश्योऽधितिष्ठति। तिष्ठती पुरुषे बुद्धि स्त्रिषु भावेषु वर्तते।।
कदाचिल्लभते प्रीतिं कदाचिदपि शोचति। न सुखेन न दुःखेन कदाचिदिह युज्यते।।
सेयं भावात्मिका भावां स्त्रीनेतानतिवर्तते। सरितां सागरो भर्ता महावेलामिवार्मिमान्।।

Intellect is the soul of man. It is when intellect alone distorts the feelings and intellects by means of the soul and within the soul, then that itself becomes the mind. From then on intellect trades the several discrete states of the different sense organs; ear becomes a hearer, touch is called the toucher; sight becomes the seer; as it tastes, it becomes the tongue; as it smells, it becomes the nose; it is intellect that trades in terms of these diverse separativenesses. Those are then said to be the sense organs; they sit dominating but invisible. Intelect exists in man and behaves in three states. Sometimes it attains pleasure and sometimes it grieves; and sometimes again it is associated with neither happiness or grief. And this itself (sometimes) supercedes these three intentional states, as does the sea, the lord of the rivers does its great boundary.

यदा प्रार्थयेते किंचित् तदा भवति सा मनः। अधिष्ठानानि वै बुद्धयां पृथगेतानि संस्मरेत्।।
इन्द्रियाण्येव मेध्यानि विजेतव्यानि कृत्स्नशः। सर्वाण्येवानुपूर्व्येण यद् यदानुविधीयते।।
अविभागगता बुद्धिभवि मनसि वर्तते। ये चैव भावा वर्तन्ते सर्व एषावेव ते त्रिषु।।
अन्वर्थाः सम्प्रवर्तन्ते रथनेमिमरा इव। प्रदीपार्थं मनः कुर्यादिन्द्रियैर्बुद्धि सत्तमैः।।
निश्चरदभिर्यथायोगं उदासीनैर्यदृच्छया।

Whenever it yearns for anything, the mind becomes that itself. One should remember that the substrata of the intellect are quite different and discrete. It is the sense organs alone that are auspicious and they should always be conquered. Whenever all these confirm themselves with whatever it is in its respecitve ways, a state of mind not at all separate from it exists in the mind. Whatever states of mind exist in these three goadings themselves they exist and commence forth together in full confirmity just as the spokes follow the rim of a wheel.

One should make the mind a factor for illumination by means of (one's) sense organs; (this is to be so achieved) by men of great intellect, (by remaning) non-moving in accordance with their own tendencies by the indifferent circumstances and as per sheer chance.

एवं स्वभावमेवेदमिति विद्वन् न मुह्यति। अशोचन् अप्रहृष्यन् हि नित्यं विगतमत्सरः।
न चात्मा शक्यते द्रव्टुमिन्द्रियैः कामगोचरैः। प्रवर्तमानैरनये दुष्करैरकृतात्मभिः।।
तेषां तु मनसा रश्मीन् यदा सम्यड्. नियच्छति। तदा प्रकाशतेऽस्यात्मा दीपदीप्ता यथाऽकृतिः।।

A learned person would not get bewildered by presuming that it is just natural to be like this (as he remains) non-grieiving, and not getting too much delighted and ever free from envy. For, soul cannot be seen with one's senses wandering about in their respective fields as desired. As these are moving about as they wont, (they are) difficult to be kept under control by persons who have not realised their soul. When their mind properly controls its these thongs, then does soul shine forth just like a figure illuminated by a lamp.

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यथा वारिचरः पक्षी न लिप्यति जले चरन्। वियुक्तात्मा तथा योगी गुणदोषैर्न लिप्यते।।

Just as a water-bird does not get smeared with water as it wanders in the water; similarly does the yogi of the liberated soul not get anointed with either the good or the bad qualities. Shanti. 248 -1-15,17

25. स्पृहा स्याद् गर्हिता चैव विधित्सा चैव कर्मणाम्। आक्रोष्टा कुरयते चैव वंचितो बुद्ध्यते स च।।
क्षत्तानुकीर्तिर्विषमः क्षुद्रो नैकृतिकः शठः। असंविभागी मानी च तथा संगी विकत्थनः।।
सर्वातिशंकी पुरुषो बलीशः कृपणोऽथवा। वर्गप्रशंसी सततमाश्रमद्वेष संकरी।।
हिंसाविहारः सततमविशेष गुणागुणः। बह्वलीकोऽमनस्वी च लुब्धोऽत्यर्थं नृशंसकृत्।।
धर्म शीलं गुणोपेतं पापमित्यवगच्छति। आत्म शील प्रमाणेन न विश्वसिति कस्य चित्।।
परेषां यत्र दोषः स्यात् तद् गुह्यं सम्प्रकाशयेत्। समानेष्वेव दोषेषु वृत्यर्थमुपघातयेत्।।
तथोपकारिणं चैव मन्यते वंचितं परम्। दत्वापि धनं काले संतपत्युपकारिणे।।
भक्ष्यं पेयमथा लेह्यं यच्चान्यत् साधु भोजनम्। प्रेक्षमाणेषु योऽश्नीयात् नृशंसमिति तं वदेत्।। सदा विवर्जनीयो हि पुरुषेण विजानता।

(iv) (*a base and a mischievous and a cruel man*) His very eager desires and longings as well as plans for workings are despicable. He reviles in harsh and abusive language and (still) gets emaciated, and he wakes up when decieved. He is given over to self publicity, difficult (to move with), mean, dishonest, a rougue, non-sharing, arrogant, attached, boastful, excessively doubting every one, lordly in taking gifts, miserly, much extolling of his own group, a constant hater of the (duties and the precepts of the) *āśramas* (and is) given over to bringing about a mixing up of the castes; his sports exist in harming others; his quality is to constantly have no special qualities; he is stinging (like a scorpion) at many places, non-perceptive, avaricious, and is a doer of excessively cruel acts. He understands a person habitually *dhārmic* and endowed with good qualities as sin; and, will not confide in any one whomsoever making his own conduct as the base line (for comparison). Where exists a blemish in others, he reveals out that secret. Among persons who have blemishes similar (to his own), he would harm them in order to secure his own ends. He would consider himself highly cheated even by those who benefit him; (and,) even if money is given to him in time, he would get angry with those who benefit him. Any thing edible, drinkable, lickable - any such other good food - he eats it up as soon as he sees it. He is called the vile .....He is ever abandoned by a knowledgeable person. Shānti 164. 4-11, 13.

26. पुरीषं यदि वा मूत्रं ये न कुर्वन्ति मानवाः। राजमार्गे गवां मध्ये धान्यमध्ये च ते शुभाः।।
शौचमावश्यकं कृत्वा देवतानां च तर्पणम्। धर्ममाहुर्मनुष्याणाम् उपस्पृश्य नदीं तरेत्।।
सूर्यं सदोपतिष्टेत न च सूर्योदये स्वपेत्। सायं प्रातर्जपेत् सन्ध्यां तिष्ठन् पूर्वां तथेतराम्।।

(vii) (*habits of clean life*) It is auspicious when men do not leave their stools or urine on the public pathways or in the midst of the cows or in the midle of a heap of the grains. Satisfying the gods after carrying out the necessary cleansings is considered to be *dharma* for people. One should cross the river after sipping its water first in reverence. He should always attend to the sun and never sleep after the sun has arisen. He should do the reverential rendering of sacred words at the evening and the morning, staying facing east-ward.

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सायं प्रातर्मनुष्याणाम् अशनं वेदनिर्मितम्। नान्तरा भोजनं द्रष्टमुपवासी तथा भवेत्।।

Eating food in the evening and morning is ordained for men in the vedas. One should not eat anything in between and should be fasting during that time. Śhānti. 193.3-5, 10.

27. दमेन सदृशं धर्मं नान्यं लोकेषु शुश्रुम। दमो हि परमो लोके प्रशस्तः सर्वधर्मिणाम्।।

(viii) (*restraint*) We have heard no other *dharma* similar to restraint. Restraint indeed is the supreme (virtue) in this world and is much extolled (as to be practised by) persons of all *dharmas*.

तस्य लिंगानि वक्ष्यामि येषां समुदयो दमः। क्षमा धृतिरहिंसा च समता सत्यमार्जवम्।।
इन्द्रियाभिजयो दाक्ष्यं मार्दवं ह्रीरचापलम्। अकार्पण्यमसंरम्भः संतोषः प्रियवादिता।।
अविहिंसानसूया चाप्येषां समुदयोदमः।

I shall tell you about (the set of) the characteristics whose assemblage constitutes restraint. Forgiveness, fortitude, non-violence, equanimity, truth, uprightness, conquest of one's own senses, capability, softness, bashfulness, non-fickleness, non-miserliness, non-agitatedness, delight, pleasant speaking, not injuring anybody and nonspitefulness - an assemblage of (all) these, is restraint. Śānti. 160. 10, 14-16.

दमो नान्यस्पृहा नित्यं गाम्भीर्यं धैर्यमेव च। अभयं रोग शमनं ज्ञाननैतदवाप्यते।।

Restraining is non-coveting of others's possessions, constant solemnity, and courage, fearlessness and a quietening down of the diseases - these are obtained by a (proper) knowledge (of the truth, underlying). Sānti 162. 12

28. सर्वमेतत् तपो मूलं कवयः परिचक्षते। न ह्यतप्ततपा मूढः क्रियाफलमवाप्नुते।।

(ix) (*penance - intensive effort*) All this has penance as its source-so extol the poets. A fool, without doing the requisite penance will not secure the fruit of his own activities.

औषधानि अगदादीनि क्रियाश्च विविधास्तथा। तपसैव हि सिद्ध्यन्ति तपोमूलं हि साधनम्।

Drugs and the antitoxic preparations and so also tthe varieties of the activities will becomes successfully accomplished only by (the requisite) penance. Any accomplishment has penance as its source. Śānti. 161. 1,4.

सत्यं त्रयोदशविधं सर्वलोकेषु भारत। सत्यं च समता चैव दमश्चैव न संशयः।।
अमात्सर्य्यं क्षमा चैव ह्रीस्तितिक्षानसूयता। त्यागो ध्यानमथार्यत्वं धृतिश्च सततं स्थिरा।।
अहिंसा चैव राजेन्द्र सत्याकार स्त्रयोदश।

Truth is of thirteen types in all the worlds, O (king of the) Bharatas. Truth and equanimity, and so also restraining undoubtedly, non-envy, forgiveness, and also bashfulness, patient endurance, non-spitefulness, renunciation, contemplativenesss and then, nobility, constant and steady fortitude and also non-violence - these constitute O king, the thirteen forms of truth. Śānti. 162. 7-9

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29. त्रयोदशैतेऽतिबलाः शत्रवः प्राणिनां स्मृताः। उपासन्ते महाराज समन्तात् पुरुषानिह।। एते प्रमत्तं पुरुषमप्रमत्तास्तुदन्ति च।

वृका इव विलुम्पन्ति दृष्ट्वा एव पुरुषं बलात्।। एभ्यः प्रवर्तते दुःखं एभ्यः पापं प्रवर्तते। इति मर्त्यो विजानीयात् सततं पुरुषर्षभ।

(x) (*emotional enemies of mankind*) (The following) thirteen are considered to be the very powerfull enemies to all persons. These O king lie in waiting upon a person here all around. They forcibly cause pain to an inalert person and tear him out like alert wolves at the very seeing (of him). From them issues forth the grief and from them issues forth the sin. The mortal man should constantly know them to be so.

एतेषां उदयं स्थानं क्षयं च पृथिवीपते। हन्त ते कथयिष्यामि क्रोधस्योत्पत्तिमादितः।।
यथा तत्वं क्षितिपते तदिहैकमनाः शृणु। लोभात् प्रभवति परदोषैरुदीर्यते।।
क्षमया तिष्ठते राजन् क्षमया विनिवर्तते।

I shall now tell you the origin, the stay and the decline for these. First, the origin of anger and the exact principle underlying. Listen to them, single mindedly. Anger arises from greed. It gets excited by the blemishes seen in others. It will stay there itself, king (*and will not attack him*) by forbearance (that he can show towards these blemishes) and it will (in fact) turn back by (such a) forbearance.

संकल्पात् जायते कामः सेव्यमानो विवर्धति। यदा प्राज्ञो विरमते तदा सद्यः प्रणश्यति।।

Desire and lust arise by first conceiving about them. They thrive by (further) indulgence. When a wise man desists (from them), they would die forthwith.

परासुता क्रोधलोभादभ्यासाच्च प्रवर्तते। दयया सर्व भूतानां निर्वेदात् सा निवर्तते।।
अवद्यदर्शनादेति तत्वज्ञानाच्च धीमताम्।।

Fratricidal tendency commences from the practising of anger and greed. This will turn back by being merciful to all beings and a sense of complete indifference and also by the (actual) seeing of the despicable and a knowledge of the underlying principle of the situation, by the intelligent.

अज्ञान प्रभवो मोहः पापाभ्यासात् प्रवर्तते। यदा प्राज्ञेषु रमते तदा सद्यः प्रणश्यति।।

Infatuation arises by ignorance and issues forth by the practising of sins; when one takes delight in (the association) with the wise, it will die out immediately.

विरुद्धानि इह शास्त्राणि ये पश्यन्ति कुरुद्वह। विधित्सा जायते तेषां तत्वज्ञानान्निवर्तते।।

When one sees the diverse Texts contending with one another, the intention to plan and carry it out arises; these will get turned back when one secures the knowledge of the underlying principles.

प्रीत्या शोकः प्रभवति वियोगात् तस्य देहिनः। यदा निरर्थकं वेत्ति तदा सद्यः प्रणश्यति।।

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Grief arises out of love and the separation from the loved objects; when one understands that (both of these latter) are meaningless, it will die out immediately.

सत्य त्यागात् तु मात्सर्यमहितानां च सेवया। एतत् तु क्षीयते तात साधूनामुपसेवनात्।।

Envy (arises) by an abandonment of truth and taking recourse to unwholesome (entities). This will decline by attending upon and serving the gentle (persons).

कुलाज्ज्ञानात् तथैश्वर्यान्मदो भवति देहिनाम्। एभिरेव तु विज्ञातैश्च स सद्यः प्रणश्यति।।

Pride arises by a knowledge of one's own family (and its status), and so also by wealth. If these are themselves understood in proper perspective, it will die forthwith.

इर्ष्या कामात् प्रभवति संहर्षाच्चैव जायते। इतरेषां तु सत्वानां प्रज्ञया सा प्रणश्यति।।

Envy arises by lust and also by the thrill of delight. This will die by an understandiing of others as well as (one's own) wisdom.

विभ्रमाल्लोक बाह्यानां द्वेष्यैर्वाक्यैरसम्मपतैः। कुत्सा संजायते राजन् लोकान् प्रेक्ष्याभिशाम्यति।।

Contempt arises by the restlessness and the agitatedness of the world outside, as well as hateful and unagreeable words. This will quieten down by looking at the worlds (more contemplatively).

प्रतिकर्तुं न शक्ता ये बलस्थायापकारिणे। असूया जायते तीव्रा कारुण्याद् विनिवर्तते।।

Acute envy arises when one is unable to counteract a powerful offender. This will turn back by (discerning) mercifulness (viz., as to how the offender is here actually a fit object for one's mercy).

कृपणान् सततं दृष्ट्वा ततः संजायते कृपा। धर्मनिष्ठां यदा वेत्ति तदा शाम्यति सा कृपा।।

By constantly seeing the miserly, a feeling of pity arises. When one understands that (the miserly) are (actually) intent on *dharma*, that pity gets quietened down.

अज्ञान प्रभवो लोभो भूतानां दृश्यते सदा। अस्थिरत्वं च भोगानां दृष्ट्वा ज्ञात्वा निवर्तते।।

Greed is seen (to be) present always, arising out of ignorance. This will turn back when the impermanency of the enjoyments is seen and understood. Śānti 163. 3-21.

30. इमे वै मानवाः सर्वे धर्मं प्रति विशंकिताः। कोऽयं धर्मः कुतो धर्मस्तन्मे ब्रूहि पितामह।।
धर्मस्त्वयमिहार्थः किममुत्रार्थोऽपि वा भवेत्। उभयार्थो हि वा धर्मस्तन्मे ब्रूहि पितामह।।

(xi) (*determination of dharma and adharma*) Yudhisthira : All of these men are apprehensive and distrustful concerning *dharma*. What is this *dharma*? Whence does this *dharma* come about. Tell me about it grandfather. Is it that the meaningfulness of *dharma* is applicable to this world alone or is it meaningful in the here-after as well. Or, is it meaningful in both the ways.

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सदाचारः स्मृतिर्वेदास्त्रिविधं धर्मलक्षणम्। चतुर्थमर्थमित्याहुः कवयो धर्मलक्षणम्।।
अपि ह्युक्तानि धर्म्याणि व्यवस्यन्त्युत्तरावरे। लोकयात्रार्थमेवेह धर्मस्य नियमं कृतः।।
उभयत्र सुखोदर्क इह चैव परत्र च। अलब्ध्वा निपुणं धर्मं पापः पापेन युज्यते।।
न च पापकृतः पापान्मुच्यन्ते केचिदापदि।...यथा धर्मसमाविष्टो धनं गृह्णाति तस्करः।
रमते निर्हरन् स्तेनः परवित्तमराजके। यदास्य तद्धरन्त्यन्ये तदा राजानमिच्छति।।
सत्यस्य वचनं साधु न सत्याद् विद्यते परम्। सत्येन विधृतं सर्वं सर्वं सत्ये प्रतिष्ठितम्।।

Bhisma. Good conduct, remembered (sacred) texts and vedas - the characteristics of *dharma* are determined by these three. Still, things that are *dharmic* are (separately) told about and are being performed for the hereafter as well as in (this) world below. The rules of *dharma* are made out for the business of life here; it is a reward of happiness in both the places, here and the here after. Not securing the efficient *dharma*, sin gets employed with (further) sin. A sinner will never get free from sin in any time of difficulty.....As a thief steals money earned by rightful means, he enjoys that money of others stealing when there is an absence of proper governance; but when someone else robs it from him, he would desire that there should have been a king to protect him....Good are the words of truth. There is nothing greater than truth. Everything is sustained by truth (and,) everything stays established in truth. Shānti. 258, 3-5, 7-10

31. दमः क्षमा धृतिस्तेजः संतोषः सत्यवादिता। ह्रीरहिंसाव्यसनिता दाक्ष्यं चेति सुखावहाः।।

(xii) (*parasara gīta. happiness*) Restraint, forbearance, fortitude, splendour, a sense of delight, telling truth, bashfulness, non-violence, not haviing any evil habits, and adroitness - these are considered to be the harbingers of happiness. Shanti. 293. 20.

32. मोहात्मकं तमस्तेषां रज एषां प्रवर्तकम्। प्रकाश बहुलत्वाच्च सत्वं ज्याय इहोच्यते।।
अविद्या बहुलो मूढः स्वप्न शीलो विचेतनः। दुर्हृषीकस्तमो ध्वस्तः सक्रोधस्तामसोऽलसः।।
प्रवृत्त वाक्यो मन्त्री च यो नराग्र्योऽनसूयकः। विधित्समानो विप्रर्षे स्तब्धो मानी स राजसः।।
प्रकाशबहुलो धीरो निर्विधित्सोऽनसूयकः। अक्रोधनो नरोधीमान् दान्तश्चैव स सात्विकः।।
सात्विकस्त्वथ सम्बुद्धो लोकवृत्तेन क्लिश्यते। यदा बुद्ध्यति बोद्धव्यं लोकवृत्तं जुगुप्सते।।
वैराग्यस्य च रूपं तु पूर्वमेव प्रवर्तते। मृदुर्भवत्यहंकारः प्रसीदत्यार्जवं च यत्।।
ततोऽस्य सर्व द्वन्द्वानि प्रशाम्यन्ति परस्परम्। न चास्य संशयो नाम क्वचित् भवति कश्चन।।

(xiii) (*qualities of tamas, rajas and satva*) Among these, *tamas* is of the nature of infatuation, *rajas* is of motivative nature. Satva however is plentiful in its illuminative nature, and hence is called here, as, being the greatest. A person of *tamas* is plentiful in non-learning, foolish, habitually indulging in dreams and fancies (but, not the realities), hesitant; he has bad or uncontrolled organs of sins and is destroyed by *tamas*; he remains angry and lazy. He who commences the work once the word is given; is himself, a councellor; that excellent among men, the non-envious, the ever doer, the immovable and the proud - *he* is a *rājasa* person. He who is plentifully illuminative, brave, non-scheming and a non-starter of an activity, non-spiteful, non-angry, intelligent and restrained - he is a man of *satva*. And, the awakened *sātvika* person when troubled by the business of mundane life and when (he thus) understands what has to be understood, will get disgusted with the business of living, in this world. Then commences within him a sense of

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renunciation at the very outset itself; his egoism gets softened; and, when what is upright and straight forward graces him, then all that is dual for him pacify one another mutually. He will never have anything called doubt anywhere. Vana. 212. 4-10.

33. श्रुति प्रमाणो धर्मोऽयमिति वृद्धानुशासनम्। सूक्ष्मा गतिर्हि धर्मस्य बहुशाखा ह्यनन्तिका।।

(*dharma*) It is the precept of the elders that this *dharma* has *vedas* as its proof. Subtle indeed is the course that *dharma* takes up, and , it has many ramifications which are in fact endless. Vana. 209. 2

34. विज्ञानार्थं मनुष्याणां मनः पूर्वं प्रवर्तते। तत् प्राप्य कामं भजते क्रोधं च द्विज सत्तम।।
ततस्तदर्थं यतते कर्म चारभते महत्। इष्टानां रूपगन्धानां अभ्यासं च निषेवते।।
ततो रागः प्रभवति द्वेषश्च तदनन्तरम्। ततो लोभः प्रभवति मोहश्च तदनन्तरम्।।
ततो लोभाभिभूतस्य रागद्वेष हतस्य च। न धर्मे जायते बुद्धिर्व्याजाद् धर्मं करोति च।।
व्याजेन चरते धर्मं व्याजेन रोचते। व्याजेन सिध्यमानेषु घनेषु द्विजसत्तम।।
तत्रैव रमते बुद्धिः ततः पापं चिकीर्षति। सुहृदिभ्वर्यमाणश्च पण्डितैश्च द्विजोत्तम।।
उत्तरं श्रुतिसम्बद्धं ब्रवीति अश्रुतियोजितम्। अधर्मस्त्रिविधस्तस्य वर्तते राग दोषजः।।
पापं चिन्तयते चैव ब्रवीति च करोति च। तस्याधर्म प्रवृत्तस्य गुणा नश्यन्ति साधवः।।

(xiv) (*ruination of a personality*) Men's mind first commences to secure a specialised knowledge in any particular field. After securing it, one will attain one's desire and, anger as well. Then, one will put forth to secure it (more firmly) and therefore commences a great amount of (motivated) activites and also takes recourse to the desired beauty of the form, the fragrance and, the repeated indulgence. Thence arise, a passionate attachment, and, then onward, a hatred (to any impediment whatsoever) and then arises the greed (of what one has thus possessed) and then, onward, an infatuation. Then, overpowered and struck down by passion and hatred, there will not arise any inclination towards *dharma* and one does *dharma* henceforth as a trickery and a guise. One carries out *dharma* by trickery and desires its end-result also as a trickery. One's mind will lust forth in the money secured thereby itself by means of guise, and then, one desires to commit sin. As the well wishers and the learned attempt to ward him (from this path of *adharma*) he will give a reply that is (bodily) connected with the *vedas* (all right) but actually employed in a way not *intended* by the *vedas*. There occurs then within him *adharma* of three kinds and born of passion and hatred; he thinks of sin, talks of it, and, also does it. The genteel qualities of him, now engaged in *adharma*, get extinguished. Vana. 210, 2-9.

35. तपो मूलमिदं सर्वं यन्मां विप्रानुपृच्छसि। इन्द्रियाण्येव संयम्य तपो भवति नान्यथा।।
इन्द्रियाण्येव तत् सर्वं यत् स्वर्गनरकावुभौ। निगृहीत विसृष्टानि स्वर्गाय नरकाय च।।

(xv) (*penance of the mind*) All this, which you enquire about , O Brahmin, has penance, as its source. It is by controllilng of the senses alone that penance comes about, and by no other means whatsoever. it is the sense organs only that constitute everything, that which is heaven or that which is hell, both, in fact. It is a heaven or a hell when controlled or let loose, respectively.

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रथः शरीरं पुरुषस्य दृष्टमात्मा नियन्तेन्द्रियाण्याहुरश्वान्।
तैरप्रमत्तः कुशली सदश्वैर्दान्तैः सुखं याति रथीव धीरः।।

The visible body of a person is his chariot. His soul is the controller. The sense organs are said to be horses. A brave person secures happiness like this charioteer;- when he is not careless regarding these horses and the horses themselves are good and well trained, and when he himself is skilful. Mb. Vana. 211. 18-19, 23.

36. व्यवहारेण शुद्धेन प्रजापालनतत्परः। प्राप्य धर्मं च कीर्तिं च लोकानाप्नोतिउभौ शुचिः।।

(xvi) (*the king's duty of governance*) By conducting his business in a pure manner and by being ever intent on the protection and welfare of his public, (the king) will attain *dharma* and fame as well, in both the world, the herein and the here after, being himslef clean (every where).

वक्ष्यामि तु यथामात्यन् यादृशांश्च करिष्यसि।
चतुरो ब्राह्मणान् वैद्यान् स्नातकान् शुचीन्। क्षत्रियांश्च तथा चाष्टौ बलिनः शस्त्रपाणिनः।।
वैश्यान् वित्तेन सम्पन्नान् एकविंशति संख्यया। त्रींश्च शूद्रान् विनीतांश्च शुचीन् कर्मणि पूर्वके।।
अष्टाभिश्च गुणैर्युक्तं सूतं पौराणिकं तथा। पंचाशद्वर्ष वयसं प्रगल्भमनसूयकम्।।...
अष्टानां मन्त्रिणां मध्ये मन्त्रं राजोपधारयेत्।।

I shall tell you how you as a king will make up the ministers (to aid you in your governace) and of what types (of persons). (They are to be from) clever *brāhmins,* physicians who are confident and illustrious and who are well graduated in their profession and are clean, eight strong and well-armed warriors, thirty one merchants who are well endowed with money, three *śūdras* who are obedient, clean and are intent on getting on in their work even before you tell them, and also bards as well as tellers of old stories ; the puranikas having eight qualities, over fifty years in age, proficient, non-envious.....the king should carry out his governance in the midst of eight ministers. (selected from this list) Santi. 85

प्रभवार्थाय भूतानां धर्मप्रवचनं कृतम्। यः स्यात् प्रभवसंयुक्तं स धर्म इति निश्चयः।।
धारणात् धर्ममित्याहुः धर्मेण विधृताः प्रजाः। यः स्यात् धारणसंयुक्तं स धर्म इति निश्चयः।।

It is for the sake of the might of all beings that the expounding of *dharma* was ordained. Whatever it is that is associated with prosperity (of the public), it is certain that it is *dharma*. Because it maintains and protects, it is called *dharma*. The public are sustained by *dharma*. Whatever it is that is associated with the sustenance (of the public), it is certain that it is *dharma*. Śānti. 109. 10, 11.

पापस्य यदधिष्ठानं तत्श्रुणुष्व नराधिप। एको लोभो महाग्राहो लोभात् पापं प्रवर्तते।।...
लोभात् क्रोधः प्रभवति लोभात् कामः प्रवर्तते। लोभान्मोहश्च माया च मानः स्तम्भः परासुता।।
अक्षमा ह्री परित्यागः श्रीनाशो धर्मसंक्षयः। अभिध्याप्रख्यता चैव सर्वं लोभात् प्रवर्तते।।

Listen O king, as to what is the substratum for sin. Greed is the one single and all consuming factor. Sin commences from greed onwards...By greed arises anger. By greed ensue infatuation, illusion, pride, rigidity, taking away of othere's life, non-forgiveness, abandonment of bashfulness, destruction of wealth, decline of

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dharma, and whatever is called as envy,- the whole of these issues forth from greed. Sānti 158. 2, 4-5.

(xvii) *effort versus fate*

37. यथा बीजं बिना क्षेत्रमुप्तं भवति निष्फलम्। तथा पुरुषकारेण विना दैवं न सिध्यति।।
क्षेत्रं पुरुषकारस्तु दैवं बीजमुदाहृतम्। क्षेत्र बीज समायोगात् ततः सस्यं समृद्ध्यते।।

Just as a seed sown in a field that is unprepared becomes useless, so will the fate not succeed without the effort of the person. Personal effort is verily the field and fate is considered to be the seed. It is by a collaboration of the field and the seed that the crop thrives up. Anu. 6,7,8

the effect of one's actions

न नश्यति कृतं कर्म सदा पंचेन्द्रियैरिहा तेहि अस्य साक्षिणो नित्यं षष्ठ आत्मा तथैव च।।

The act carried out here by means of the five sensory organs is never lost. They are themselves the constant witnesses (for the acts, carried out), and similarly is (one's) soul, the sixth (witness).

यथा धेनु सहस्रेषु वत्सो विन्दति मातरम्। एवं पूर्वकृतं कर्म कर्तारमनुगच्छति।।

As the calf is sure to secure its own mother in a herd of thousands of cows so also will an act carried out before, surely follows its perpetrator. Anu. 7.5, 22

38. (उपमन्युः) अर्क पत्राणि भक्षयित्वान्धीभूतोऽस्म्यतः कूपे पतित इति।
(उपाध्यायः) अश्विनौ स्तुहि। तौ देवभिषजौ त्वां चक्षुष्मन्तं कर्तारविति।

(xviii) (*Aświns as the physicians of the gods; the effect of calatropis leaves on eye sight*)

(Upamanyu :) "I have become blind by eating the leaves of Calatropis; hence have I fallen into the well".

(Preceptor :) "Pray to the Aświns. They are the physicians of the gods. They would render you to be endowed with eye-sight (again)". Ādi. 3.55, 56.

39. यत्र राजा कुरु श्रेष्ठः परिक्षिन्नाम वै द्विजा तक्षकेण भुजंगेन धक्ष्यते सोऽद्य वै।।
गच्छाम्यहं तं त्वरितः सद्यः कर्तुमपज्वरम्। मयाभिपन्नं तं चापि न सर्पो धर्षयिष्यति।।

(*physicians, specially meant for snake poisons*) Kaśyapa. "O *brāhmin*, I am going fast now where the extolled king of the Kurus, Pariksit by name is going to be bitten any time today as I gather, so as to free him from the affliction immediately. When he secures me, no serpent can harm him."

किमर्थं तं मया दष्टं संजीवयितुमिच्छसि। अहं स तक्षको ब्रह्मन् पश्य मे वीर्यमद्भुतम्।।

Takaṣaka (who was the serpent in the form of the *brāhmin*) "Why do you desire to revive him when bitten by me. I am that very Takṣaka, revered Sir, and look at my stupendous prowess. You will not be able to revive that king once bitten by me."

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इत्युक्त्वा तक्षक स्तत्र सोऽदंशद् वैवनस्पतिम्। स दष्टमात्रो नागेन भस्मीभूतोऽभवन्नगः।।
काश्यपश्च ततो राजन् अजीवयत तं नगम्।

So saying, Taksaka bit a huge tree nearby. That lofty tree immediately after being bitten by the serpent became reduced to ashes. However, Kaśyapa revived it then, immediately. Ādi. 50. 19-23.

40. ज्ञानं तत्वार्थ सम्बोधः शमश्चित्त प्रशान्तता। दया सर्व सुखैषित्वं आर्जवं समचित्तता।।

(xix) (*miscellania*) Knowledge is the understanding of the principle of the entities. Peacefulness is the quietitude of mind. Sympathy is desiring happinesss of all. Uprightness is even mindedness. M.B. Vana. 313. 90.

क्रोधः सुदुर्जयः शत्रुर्लोभो व्याधिरनन्तकः। सर्व भूतहितः साधुरसाधुर्निर्दयः स्मृतः।।

Anger is what is difficult to be conquered. Greed is the endless disease. Gentility is wholesomeness to all beings. Mercilessness is what is called ungentlemanly. M.B. vana. 313. 92

मोहो हि धर्ममूढत्वं मानस्तु आत्माभिमानिता। धर्मनिष्क्रियताऽऽलस्यं शोकस्तु अज्ञानमुच्यते।।

Infatuation is being foolish or ignorant as regards dharma. Arrogance is excessive pride in oneself. Laziness is non-doing any thing at all in matters concerning dharma. Grief is called ignorance.

तर्कोऽप्रतिष्टः श्रुतयो विभिन्ना नैकोऋषिर्यस्य मतं प्रमाणम्।
धर्मस्य तत्वं निहितं गुहायां महाजनो येन गतः स पन्थाः।।

Ratiociantion is (ever) unsettled. The vedic texts (one can quote) are diverse. There is no single rsi whose opinion can be considered as the undoubtable proof. The principles of dharma is (ever) hidden within a cave. The path (one should take up in such a situation) is what the great persons have taken up (before).

(xx) (*societal organisation - duties of the four castes*).

अक्रोधः सत्यवचनं संविभागः क्षमा तथा। प्रजनः स्वेषु दारेषु शौचमद्रोह एव च।।
आर्जवं भृत्य भरणं नवैते सार्ववर्णिकाः।।

Not getting angry, speaking truth, sharing ones prosperity with others, forgiveness, procreation in one's own women, cleanliness, not hating, uprightness and (proper) maintenance of one's own servants - these nine are the duties common to all castes.

दममेव महाराज धर्ममाहुः पुरातनम्। स्वाध्यायाभ्यसनं चैव तत्र कर्म समाप्यते।।
...मैत्रो ब्राह्मण उच्यते।

Restraint is the sole and the ancient duty of the *brāhmin*; his duties are over when he indulges eternally in self-study and a practising of the same (in real life).... (and,) friendliness (to all) is what is called *brāhmin*.

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दानमध्ययनं यज्ञो राज्ञां क्षेमो विधीयते।... स्वेषु धर्मेषु अवस्थाप्य प्रजाः सर्वा महीपतिः।।
धर्मेण सर्व कृत्यानि शमनिष्ठानि कारयेत्। परिनिष्ठितकार्यस्तु नृपतिः परिपालनात्।।

Giving gifts, study and conducting sacrificial rituals, are prescribed as (measures of) safety to the king (i.e. a *kṣatriya*). Keeping all the citizens in their own respective duties, the king should get all works done, himself grounded in (securing) peace (every where). The duties of the king are over when he carries out proper protection to his public.

दानमध्ययनं यज्ञः शौचेन धनसंचयः।...तस्माच्छूद्रस्य वर्णानां परिचर्या विधीयते।।

Giving gifts, study, conducting sacrificial rituals, accumulating wealth in a clean manner-(these are the duties of a *vaiśya* or the merchant). Attending on menial service for the other (three) castes is the duty prescribed for the *śūdras*. Mb. Santi 60.

देवतातिथि भृत्यानां पितृणामात्मनश्च यः। स निर्वपति पंचानामुच्छ्वसन् न स जीवति।।

He who does not fulfil his commitemnts towards the gods, the guests, the servants, the parents and the self- he does not (really) live at all, even if he is breathing through the five primordial elements (that constiute him). Vana. 313. 58

दाक्ष्यमेकपदं धर्म्यं दानमेकपदं यशः। सत्यमेकपदं स्वर्ग्यं शीलमेकपदं सुखम्।।

Capability is dharma all by itself. Giving gifts is the fame, all by itself. Truth is heavenly all by itself; (and,) character is happiness, all by itself.

धन्यानामुत्तमं दाक्ष्यं धनानामुत्तमं श्रुतम्। लाभानां श्रेय आरोग्यं सुखानां तुष्टिरुत्तमा।।

Capability is the best among the blessed. Learning is the best among the wealths. Health is the most auspicious profit; (and,) contentment, the best among the happinesses.

मानं हित्वा प्रियो भवति क्रोधं हित्वा न शोचति।
कामं हित्वा अर्थवान् भवति लोभं हित्वा सुखी भवेत्।।

By giving up pride, one becomes loveable. By giving up anger, one does not lament. By giving up lust, one secures wealth. By giving up greed, one can become happy.

तपः स्वधर्म वर्तित्वं मनसो दमनं दमः। क्षमा द्वन्द्व सहिष्णुत्वं ह्रीरकार्य निवर्तनम्।।

Penance is to be engaged in what is in acordance with one's own *dharma*. Restraint is the controlling of the mind. Forgiveness is tolerance to both sides (of a situation). Bashfulnes is the turning away from such acts that are despicable.

C. *Bhagavadgita*

41. कर्मण्येवाधिकारस्ते मा फलेषु कदाचन। मा कर्मफलहेतुर्भूर्मा ते संगोऽस्त्वकर्मणि।।

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(i) (*attitude to work*) Your authority is only upon the works (that you carry on) and never upon the fruits (that you hope to get thereby). (On this account, however) see that you never make fruit the cause of your work, nor should you get attached (or, take a liking) in doing no work (at all, consequently).

योगस्थः कुरु कर्माणि संगं त्यक्त्वा धनंजय। सिद्ध्यसिद्ध्योः समो भूत्वा समत्वं योग उच्यते।।

Do your work, remaining steadfast in *yoga* and abandoning a sense of attachment, Dhananjaya, and with an equanimity (of mind) in what you secure and what you do not secure. Equanimity is what is called *yoga*. 2.47, 48.

स्थित प्रज्ञस्य का भाषा समाधिस्थस्य केशव। स्थितधीः किं प्रभाषेत किमासीत व्रजेत किम्।।

(ii) (*characteristics of a steady person*) Arjuna : What is the language of a person of stead-fast wisdom, staying as he does in a state of *samadhi* , Kesava ? What does such a man of steady intellect speak ? How does he sit and how does he move about ?

प्रजहाति यदा कामान्सर्वान्पार्थ मनोगतान्। आत्मन्येवात्मना तुष्टः स्थित प्रज्ञ स्तदोच्यते।।

Sri Bhagavan :

When (a person) rejects in all ways all the desires of the mind, Partha, and is fully satisfied in his own self, he is then called a man of steady wisdom.

दुःखेषु अनुद्विग्नमनाः सुखेषु विगतस्पृहः। वीतराग भय क्रोधः स्थितधीर्मुनिरुच्यते।।

Not upset in mind at the (times of) grief and non-hankering at the (times of) happiness; bereft of passion, fear and anger; -such a person of steady intellect is called a sage.

यः सर्वत्रानभिस्नेहस्तत्तत्प्राप्य शुभाशुभम्। नाभिनन्दति न द्वेष्टि तस्य प्रज्ञा प्रतिष्ठिता।।

He who has no affection, whenever he obtains the good and the not good as they come about and does neither praise them nor hate, - such a man's wisdom is steadfast.

यदा संहरते चायं कूर्मोऽङ्गानीव सर्वशः। इन्द्रियाणीन्द्रियार्थेभ्यः तस्य प्रज्ञा प्रतिष्ठिता।।

When he draws within himself the sense from the sense objects just as a tortoise draws its limbs within from all directions,-his wisdom is steadfast.

विषया विनिवर्तन्ते निराहारस्य देहिनः। रसवर्जं रसोऽप्यस्य परं दृष्ट्वा निवर्तते।।

The sense objects turn back from a person who keeps himself hungry for them, excluding the taste for the food (which however still remains in him). Even this taste within him will turn away when he realises (lit. sees) the Great Absolute.

यततो ह्यपि कौन्तेय पुरुषस्य विपश्चितः। इन्द्रियाणि प्रमाथीनि हरन्ति प्रसभं मनः।।
तानि सर्वाणि संयम्य युक्त आसीत मत्परः। वशे यस्येन्द्रियाणि तस्य प्रज्ञा प्रतिष्ठिता।।

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Even while he keeps trying Kaunteya, the sense organs of such a well learned person remain very powerful; they snatch away the mind violently. Controllling all of them he should station himself properly intent on Myself. He whose sense organs are under control (in this way), his wisdom is stead-fast.

ध्यायतो विषयान्पुंसः संगस्तेषूपजायते। संगात्संजायते कामः कामात्क्रोधोऽभिजायते।।
क्रोधाद्भवति संमोहः संमोहात्स्मृति विभ्रमः। स्मृतिभ्रंशाद् बुद्धि नाशो बुद्धि नाशात्प्रणश्यति।।

As a person starts contemplating upon his sense organs, his attachment towards them gets generated. From attachment there will arise a desire (to experience them). From desire ensues anger (whenever there is an obstruction to fulfill these desires). From anger will come about an infatutation (towards such desires), (and), from infatuation a deviation in one's retentivity. From deviation, (there will ensue) a loss of intellect and from loss of intellect, he perishes.

राग द्वेष वियुक्तैस्तु विषयानिन्द्रियैश्चरन्। आत्मवश्यैर्विधेयात्मा प्रसादमधिगच्छति।।
प्रसादे सर्व दुःखानां हानिरस्योपजायते। प्रसन्नचेतसो ह्याशु बद्धिः पर्यवतिष्ठते।।

It is by being free from passionate attachment and hatred but experiencing the sense-objects that are normal and natural; and by keeping them all under his own control, with his soul well subdued; he will attain the serenity of destruction of all his grief. The intellect of a serene mind will get immediately steadfast.

नास्ति बुद्धिरयुक्तस्य न चायुक्तस्य भावना न चाभावयतः शान्तिरशान्तस्य कुतः सुखम्।।
इन्द्रियाणां हि चरतां यन्मनोऽनुविधीयते। तदस्य हरति प्रज्ञां वायुर्नावमिवांम्भसि।।
तस्माद्यस्य महाबाहो निगृहीतानि सर्वशः। इन्द्रियाणीन्द्रियार्थेभ्यस्तस्य प्रज्ञा प्रतिष्ठिता।।

There is no intellect for a person who does not control his own internal proclivities (*asāmāhita antahkarna* Samkarācārya) and there is no feeling (of intentness on his own soul, *ātmābhinivesa*: ibid) and there is no peace for a person who does not feel so. Where can there be happiness for a man without peace ? He whose mind is regulated by his sense organs as they move about,-it is this moving about that snatches away his wisdom, just as the wind (snatches) a boat in deep waters. That is why, O great warrior, it is only *his* wisdom is steadfast, *whose* sense organs are fully controlled in always as regards their sense objects.

या निशा सर्व भूतानां तस्यां जागर्ति संयमी। यस्यां जाग्रति भूतानि सा निशा पश्यतो मुनेः।।

A man of restraint remains awake when it is night for all the world. When the whole world keeps awake, that is the night for a discerning sage.

आपूर्यमाणमचलप्रतिष्ठं समुद्रमापः प्रविशन्ति यद्वत्।
तद्वत्कामायं प्रविशन्ति सर्वे स शान्तिमाप्नोति न काम कामी।।

Just as the waters (of all the rivers) enter into the sea as it continually gets filled up (but it self remains all the while) non-moving and steady, so do all tthe desires enter into such a man and, he alone gets peace, not the one who desires desires.

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विहाय कामान्यः सर्वान्पुमांश्चरति निस्पृहः । निर्ममो निरहंकारः स शान्तिमधिगच्छति ।।

When a person moves about giving up his desires and with no hankering about ; with no sense of selfishness and free from egoism; he, attains peace. 2.54-71.

42. अथ केन प्रयुक्तोऽयं पापं चरति पूरुषः । अनिच्छन् अपि वार्ष्णेय बलादिव नियोजितः ।।

(iii) (*impulses for unhealthy behaviour*)
Arjuna. And goaded by whom does this person commit a sin, even though he does not desire, as if he is forcibly employed as it were, to do so, Vārshneya ?

काम एष क्रोध एष रजोगुण समुद्भवः । महाशनो महापाप्मा विद्ध्येनमिह वैरिणम् ।।
धूमेनाव्रियते वह्निर्यथादर्शो मलेन च । यथोल्बेनावृतो गर्भस्तथा तेनेदमावृतम् ।।

Bhagavān. This lust and this anger - these are both born out of the quality of rajas (i.e. a sense of attachment and passion). Know them to be the great consumers (lit. eaters), the great sinners and the (real) ememies here. Just as the effulgent fire gets clouded by (its own) smoke, a mirror by its impurity, the foetus by its envelopes, so does (a person in the hold of lust and anger) get enveloped.

आवृतं ज्ञानमेतेन ज्ञानिनो नित्य वैरिणा । काम रूपेण कौन्तेय दुष्पूरेणानलेन च ।।

His knowledge is clouded by these (two) which are constant enemies to the knowers, in the form of lust and desire-as (if) by an indefatigable fire.

इन्द्रियाणि मनो बुद्धिरस्याधिष्ठानमुचयते । एतैर्विमोहत्येष ज्ञानमावृत्य देहिनम् ।।
तस्मात्वमिन्द्रयाण्यादौ नियम्य भरतर्षभ । पाप्मानं प्रजहिह्येनं ज्ञान विज्ञान नाशनम् ।।

Sense organs and mind as well as intellect are considered to be the substrata for this lusting. These perplex a person encompassing his knowledge and wisdom. Therefore by first controlling the sense, O great warrior of the Bharatas, conquer these two great sinners that destroy all knolwedge and expertise.

इन्द्रियाणि पराण्याहुरिन्द्रियेभ्यः परं मनः । मनसस्तु परा बुद्धिर्यो बुद्धेः परतस्तु सः ।।
एवं बुद्धेः परं बुद्ध्वा संस्तभ्यात्मानमात्मना । जहि शत्रुं महाबाहो कामरूपं दुरासदम् ।।

Sense organs are considered to be great (and powerful). Mind is greater than the sense organs. Intellect is greater than mind. That Absolute is greater than intellect. Thus knowing what is greater than intellect and keeping oneself under control by one's own effort, conquer this invincible enemy in the form of lusting, O warrior. 3.36-43.

43. यस्य सर्वे समारम्भाः कामसंकल्प वर्जिताः । ज्ञानाग्नि दग्ध कर्माणं तमाहुः पण्डितं बुधाः ।।
त्यक्त्वा कर्मफलासंगं नित्यतृप्तो निराश्रयः । कर्मण्यभिप्रवृत्तोऽपि नैव किंचित्करोति सः ।।

(iv) (*the value of learning*) He whose commencement of all undertakings is devoid of any notion of desire, he whose activities are all burnt in the fire of knowledge, the wise call him a learned man. Having given up any attachment

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whatsoever with the fruits of the action, always contented and dependent on none, even though he is instigated by activities, *he* does not do any thing at all. 4.19, 20.

न हि ज्ञानेन सदृशं पवित्रमिह विद्यते। तत्स्वयं योग संसिद्धः कालेनात्मनि विन्दति।।
श्रद्धावान् लभते ज्ञानं तत्परः संयतेन्द्रियः। ज्ञानं लब्ध्वा परां शान्तिमचिरेणाधिगच्छति।।
अज्ञ श्चाश्रद्दधानश्च संशयात्मा विनश्यति। नायं लोकोऽस्ति न परो न सुखं संशयात्मनः।।

There is nothing holy here like knowledge. This knowledge refined by practice of such a *karma yoga* (detached action) will (lead one to) attain the knowledge of self in course of time. It is a man of faith, intent on that (i.e. securing self) with his sense organs controlled, who finally secures knowledge. Having obtained the knowledge he will secure peace not long after. A man of doubts, ignorant and without faith, perishes. He neither has this world, nor the next world and not even happiness. 4.39,40.

उद्धरेदात्मनात्मानं नात्मानमवसादयेत्। आत्मैवह्यात्मनो बन्धुरात्मैव रिपुरात्मनः।।

One should uplift oneself by one's own self. One should never destroy one' won self. Self alone is the friend and the relative to one's self and self alone is the enemy of the self. 6.5.

44. युक्ताहार विहारस्य युक्त चेष्टस्य कर्मसु। युक्तस्वप्नाव बोधस्य योगो भवति दुःखहा।।
यदा विनियतं चित्तं आत्मन्येवावतिष्ठते। निःस्पृहः सर्वकामेभ्यो युक्त इत्युच्यते तदा।।

(*yogi*) For a person whose sports and food as well as general behaviour in work and sleep and wakefulness are all proper and appropriate, practising of *yoga* would destroy his grief. When the well restrained mind remains within (the confines of) one's self and one is disinterested from (i.e. as regards all desires), *he* is then called adequate (or, rather, a complete person).

यथा दीपो निवातस्थो नेंगडते सोपमा स्मृता। योगिना यतचित्तस्य युज्जतो योगमात्मनः।।

As a light in a windless place does not move about, that is said to be the (proper) simile for the yogi of the controlled mind as he yokes his mind to his own self (and keeps it steady). 6.17-19.

अथचित्तं समाधातुं न शक्नोषि मयि स्थिरम्। अभ्यासयोगेन ततो मामिच्छाप्तुं धनंजय।।
अभ्यासेऽपि असमर्थोऽसि मत्कर्मपरमो भव। मदर्थमपि कर्माणि कुर्वन् सिद्धिमवाप्स्यसि।।
अथैतदपि अशक्तोऽसि कर्तुं मद्योगमाश्रितः। सर्वकर्म फलत्यागं ततः कुरु यतात्मवान्।।
श्रेयो हि ज्ञानमभ्यासात् ज्ञानात् ध्यानं विशिष्यते। ध्यानात् कर्मफल त्यागः त्यागाच्छान्तिमनन्तरम्।।

In case you are not able to keep your mind steadily concentrated on Me, then desire to do so Dhananjaya by repeated practising. In case you are not able to carry out such practising, become one who considers My task as absolute. Even by doing work purely for My sake, you will be able to secure your goal. And in case you are unable to do even this, take refuge in Me and then with self restraint renounce the fruit of all of your action. Knowledge is greater than practice. Contemplation is more commendable than knowledge. Renunciation of the fruit of action is greater than contemplation. It is after such a renunciation (there) comes about peace,

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45. अद्वेष्टा सर्व भूतानां मैत्रः करुण एव च। निर्ममो निरहंकारः समदुःख सुखः क्षमी।।
संतुष्टः सततं योगी यतात्मा दृढनिश्चयः। मय्यर्पित मनो बुद्धिर्यो मद्भक्तः स मे प्रियः।।
अनपेक्षः शुचिर्दक्ष उदासीनो गतव्यथः सर्वारम्भपरित्यागी यो मद्भक्तः स मे प्रियः।।
यो न हृष्यति न द्वेष्टि न शोचति न काङ्क्षति। शुभाशुभपरित्यागी भक्तिमान्यः स मे प्रियः।।
समः शत्रौ च मित्रे च तथा मानापमानयोः। शीतोष्ण सुख दुःखेषु समः संग विवर्जितः।।
तुल्यनिन्दा स्तुतिर्मौनी संतुष्टो येनकेनचित्। अनिकेतः स्थिरमतिर्भक्तिमान्मे प्रियो नरः।।
ये तु धर्म्यामृतमिदं यथोक्तं पर्युपासते। श्रद्धधाना मत्परमा भक्तास्तेऽतीव मे प्रियाः।।

(vi) (*a person whom God likes*) He who does not hate and is friendly towards all beings with only compassion (everywhere), selfless, egoless, equanamous in grief and happiness, forbearing, contented, constantly doing yoga, restrained in his self, firm in resolution; his mind and intellect dedicated to Me and he who is devoted to me,–*he* is beloved to me. By whom none in the world gets upset and hateful and who (simultaneously) is not afraid of the whole world and is freed from joy or indignation, fear and excitement, –*such* a one is beloved to Me. He who is desire free, clean, capable, impartial, bereft of distress and who renounces commencement of all action,–*such* a devotee of Mine is most beloved to Me. He who does not take delight or does not hate, neither grieves nor hankers after, renounces the auspicious and the inauspicious,–*such* a devotee is beloved to me. Equal towards the enemies and the friends, and similarly equal in honour and dishonour; equable in cold and heat, happiness and grief and devoid of attachment; equable in blame and praise; silent, content with whatever he gets; and he who does not have any sense of belongings and has his mind steady and devoted –*such* a person is beloved to me.

He who practices this nectar of dharma as told (here), with faith and considering Myself as the Absolute, such a devotee is most beloved to me. 12.8–20

46. सत्वं रजस्तम इति गुणाः प्रकृतिसंभवाः। निबध्नन्ति महाबाहो देहे देहिनमव्ययम्।।
तत्र सत्वं निर्मलत्वात्प्रकाशकमनामयम्। सुखसंगेन बध्नाति ज्ञानसंगेन चानघ।।
रजो रागात्मकं विद्धि तृष्णासंग समुद्भवम्। तन्निबध्नाति कौन्तेय कर्मसंगेन देहिनम्।।
तमस्त्वज्ञानजं विद्धि मोहनं सर्व देहिनाम्। प्रमादालस्य निद्राभिस्तन्निबध्नाति भारत।।

(*satva, raja and tamas*) *Satva, raja* and *tama* -- these three qualities born by nature tie down the indestructible soul in the body, O Great Warrior. Therein, *satva* ties down the luminous and the unanointable (soul) by its purity and an attachment of happiness and an attachment of knowledge, O sinless one. Know that *raja* is what naturally taints one, (itself being) born of thirst and attachment. This ties down the soul, Kaunteya by an attachment of (incessant) activity. *Tamas* however is born out of ignorance and this is (what constitutes) a bewilderment for all beings. It is by commitment of faults, laziness and sleep that this ties down (the soul), O Bharata.

सत्वं सुखे संजयति रजः कर्मणि भारत। ज्ञानमावृत्य तु तमः प्रमादे संजयत्युत।।

Satva employs a person in what is happy, *raja* engages him in activity, Bhārata, while *tama* however, engages him in commiting faults, clouding out his knowledge.

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14, 5-9

सर्व द्वारेषु देहेऽस्मिन् प्रकाश उपजायते। ज्ञानं यदा तदा विद्यात् विवृद्धं सत्वमित्युत।।
लोभः प्रवृत्तिरारम्भः कर्मणाम् अशमः स्पृहा। रजस्येतानि जायन्ते विवृद्धे भरतर्षभ।।
अप्रकाशोऽप्रवृतिश्च प्रमादो मोह एव च। तमस्येतानि जायन्ते विवृद्धे कुरुनन्दन।।

When in all doors of this body there arise an illuminated-ness and knowledge one should then consider that satva has flourished here. Greed, engagement, commencement of activities, unquenchable thirst - these arise Bhārata, if *rajas* flourishes. Non-illumination, non-engagement, faults, and infatuation - these arise when *tamas flourishes,* O son of Kuru. 14, 11-13.

कर्मणः सुकृतस्याहुः सात्विकं निर्मलं फलम्। रजसस्तु फलं दुःखमज्ञानं तमसः फलम्।।
सत्वात्संजायते ज्ञानं रजसो लोभ एव च। प्रमादमोहौ तमसो भवतोऽज्ञानमेव च।।

(The wise) say that the fruit of *sātvik* act is good and blemish free. The fruit of a *rājasic* work is grief. The fruit of a *tāmasic* work is ignorance. From *satva* arises knowledge, from *rajas*, only greed while from *tamas*, only faults and perplexity and also an absence of knowledge. 14. 16,17

47. अभयं सत्व संशुद्धिः ज्ञानयोग व्यवस्थितिः। दानं दमश्च यज्ञश्च स्वाध्यायस्तप आर्जवम्।।
अहिंसा सत्यमक्रोधस्त्यागः शान्तिरपैशुनम्। दया भूतेष्वलोलुप्त्वं मार्दवं ह्रीरचापलम्।।
तेजः क्षमा धृतिः शौचमद्राहो नातिमानिता। भवन्ति संपदं दैवीमभिजातस्य भारत।।

(vii) (*godly and demonaical wealth*) Fearlesness, purity of innate proclivities, a stable placement of oneself in knowledge and *yoga*, giving gifts, restraint, indulgence in sacrifical offerings, selfstudy, penance, uprightness, non-violence, truth, non-anger, a spirit of renunciation, peacefulness, non-timidity, compassion among all beings, absence of cupidity, mildness and softness, shyness, non-fickleness, lustrous nature, forbearance, fortitude, cleanliness, non-hatred, non considering oneself as extremely worthy - these constitute the godly wealth of a person born along with him (i.e. constitutionally inherent in him). 16, 1-3

दम्भो दर्पोऽतिमानश्च क्रोधः पारुष्यमेव च। अज्ञानं चाभिजातस्य पार्थ संपदमासुरीम्।।

Pelf, arrogance, a sense of excessive prestige, anger and harshness as well, lack of knowledge-these are the demonaical wealth of a person born along with him. 16.4

द्वौ भूतसर्गौ लोकेऽस्मिन् दैव आसुर एव च। दैवी विस्तरशः प्रोक्त आसुरं पार्थ मे श्रुणु।।

There are two types of human creations in this world, godly and demonaical. The godly has been told in extenso. Now listen from me about the demonaical, Pārtha. 16.6.

प्रवृत्तिं च निवृत्तिं च जना न विदुरासुराः। न शौचं नापि चाचारो न सत्यं तेषु विद्यते।।
असत्यमप्रतिष्ठंते जगदाहुरनीशवरम्। अपरस्परसम्भूतं किमन्यत्काम हैतुकम्।।
एतां दृष्टिमवष्टभ्य नष्टात्मानोऽल्पबुद्धयः। प्रभवन्त्युग्रकर्माणः क्षयाय जगतोऽहिताः।।
काममाश्रित्य दुष्पूरं दम्भमानमदान्विताः। मोहाद्गृहीत्वासद्ग्राहान्प्रवर्तन्तेऽशुचिव्रताः।।
चिन्तामपरिमेयां च प्रलयान्तामुपाश्रिताः। कामोप भोगपरमा एतावदिति निश्चिताः।।

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आशापाश शतैर्बद्धाः कामक्रोध परायणाः । ईहन्ते काम भोगार्थमन्यायेन अर्थसंचयान् ।।
इदमद्य मया लब्धमिदं प्राप्स्ये मनोरथम् । इदमस्ति इदमपि मे भविष्यति पुनर्धनम् ।।
असौ मया हतः शत्रुर्हनिष्ये चापरानपि । ईश्वरोऽहम् भोगी सिद्धोऽहं बलवान् सुखी ।।
आढ्योऽभिजनवानस्मि कोऽन्योस्ति सदृशो मया । यक्ष्ये दास्यामि मोदिष्य इत्यज्ञानविमोहिताः ।
अनेकचित्त विभ्रान्ता मोह जाल समावृताः । प्रसक्ताः कामभोगेषु तन्ति नरकेऽशुचौ ।।

Such demonaical persons do not know what to take up or what to give up. Neither do they know what is clean or what should be one's conduct (in life or at any particular time) and , not even truth resides in them. For them, there is untruth, instability and absence of values and they say that there is no God for this world and that this world is created by mutual activities and would argue as to what else is the reason for all this, apart from such just lusting. Holding on to such a view, with their self (completely) lost and (they themselves having but) a small intellect, they become actors of violence for the destruction of the world and are thus, toally unwholesome. Holding on to this standpoint of unquenchable lust, and filled with pride, prestige and arrogance and seizing upon an untrue point of view because of their own confusion and infatuation, they commence (their work) with uncleanliness as their vow. Taking refuge always in unmeasurable broodings and till their (own) dissolution (thereby) and considering the enjoyment of lust as the most excellent goal and fully conviced that that is all that there is, (they become) tied up with hundreds of the lassoos of desires and expectations. And considering lust and anger as the last resort, they desire a heaping up of wealth by deceipt for the sake of enjoying their lust. (The train of their thinking would be:) "This has been obtained by me now and this wish of mine I shall secure henceforth. This is what I have now and this wealth again will also come about to me. Such and such a person has been destroyed by me now and I shall kill other enemies also in the near future. I am the Lord. I am the enjoyer. I am the fully accomplished. I am powerful and I am happy. I am highly respected in the society and I have such a retinue of people at my disposal. Who is there that can be comparable to me ? Whoever begs from me, I shall give him the gifts and what ever else they desire". Thus enamoured in ignorance, bewildered by a great many thoughts, surrounded by a network of infatuation and fully engaged in enjoyment of lust, they fall down into an unclean hell.

आत्मसंभाविताः स्तब्धा धनमानमदान्विताः । यजन्ते नामयज्ञैस्ते दम्भेनाविधि पूर्वकम् ।।

Considering themselves highly meritorious, these inert persons carry out sacrificial offerings to me filled with prestige and arrogance and consisting of their wealth and accompanied with chantings of My names in pelf and show and in wholly unprescribed manners. 16 17-1.

त्रिविधं नरकस्येदं द्वारं नाशनमात्मनः । कामः क्रोधस्तथा लोभस्तस्मादेतत्त्रयं त्यजेत् ।।

Of three kinds are the doors for hell to destroy oneself : lust, anger and then greed. Therefore one should give up these three. 16.21.

त्रिविधा भवति श्रद्धा देहिनां सा स्वभावजा । सात्विकी राजसी चैव तामसी चेति तां श्रृणु ।।
सत्वानुरूपा सर्वस्य श्रद्धा भवति भारत । श्रद्धामयोऽयं पुरुषो यो यच्छ्रद्धः स एव सः ।।

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There are three kinds of faith that occur in human beings - all being natural (to individual persons), such as *sātivic, rajasic* and *tāmasik* . Listen to them, now. The faith of all persons is in confirmity with their such an innate nature. Any man is as his faith. Whatever is his faith, *that* constitutes the man concerned. 17,2,3

यजन्ते सात्विका देवान् यक्षरक्षांसि राजसाः । प्रेतान् भूतगणांश्चान्ये यजन्ते तामसा जनाः ।।
अशास्त्रविहितं घोरं तप्यन्ते ये तपो जनाः । दम्भाहंकार संयुक्ताः कामरागबलान्विताः ।।
कर्शयन्तः शरीरस्थं भूतग्राममचेतसः । यां चैवान्तः शरीरस्थं तान् विद्धि आसुरनिश्चयान् ।

The *sātvic* persons perform sacrificial offerings to the gods, the *rājasic* to the *yakṣas* and the *rākṣasas* and the other people of the *tāmasic* nature, to the departed souls and other evil spirits. Those persons who do terrible penances ; not, as prescribed in the *śāstras* , and associated with pelf and egoism and endowed as they are with lust and passion ; tormenting the primordial elements within their own body insentiently as well as Myself who stays within the interior of their body-know them to be the persons of evil or *āsruric* determination.

आहारस्त्वपि सर्वस्य त्रिविधो भवति प्रियः । यज्ञस्तपस्तथा दानं तेषां भेदमिमं श्रृणु ।।

Even the food that one likes is of three kinds to all the human beings and so are the sacrificial offerings, penance as well as the gifts they give. Listen to the distinction (that exists) among them (as follows).

आयुः सत्व बलारोग्य सुख प्रीतिविवर्धनाः । रस्याः स्निग्धाः स्थिरा हृद्या आहाराः सात्विक प्रियाः ।।
कट्वम्ल लवणात्युष्णा तीक्ष्ण रूक्षविदाहिनः । आहारा राजसस्येष्टा दुःख शोकामय प्रदाः ।।
यातयामं गत रसं पूति पर्युषितं च यत् । उच्छिष्टमपि चामेध्यं भोजनं तामस प्रियम् ।।

The foods that promote life, vitality, strength, health, happiness and liking; the foods that are full of freshness and juice, unctuous, steady, charming to the heart - these are what are liked by the *sātivic* persons. Bitter, acidic, salty, very hot, pungent, dry and burning - foods of this type that bestow grief, sadness and diseases are pleasing to the *rājasic* persons. A meal that is half cooked; with no juice left in it; what is full of worms and kept overnight; or even the left over or the unedible - this is what is pleasing to the *tāmasic*.

अफलाकाङ्क्षिभिर्यज्ञो विधिर्दृष्टो य इज्यते । यष्टव्यमेवेति मनः समाधाय स सात्विकः ।।
अभिसंधाय तु फलं दम्भार्थमपि चैव यम् । इज्यते भरत श्रेष्ठ तं यज्ञं विद्धि राजसम् ।।
विधिहीनमसृष्टान्नं मन्त्रहीनमदक्षिणम् श्रद्धाविरहितं यज्ञं तामसं परिचक्षते ।।

A sacrificial offering which is carried out with no intention on the fruits, as seen (i.e. indicated) by the *śāstraic* injunctions, and as it has to be performed, with the mind completely gathered together, viz., complascent and tranquil, *that* is a *sātivc* offering. An offering carried out with the fruit thereof as the sole intent or soley as a means of showing off, know it O foremost among the Bhāratas as being *rajasic* . An offering that is deficient in *śāstraic* injunctions; carried out with unpurified rice; deficient in incantations and with no offering of the fee for the priests and with no faith (on the part of the performer even) - this is considered to be of the *tāmasa* kind.

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देव द्विजगुरु प्राज्ञ पूजनं शौचमार्जवम्। ब्रह्मचर्यमहिंसा च शारीरं तप उच्यते।।
अनुद्वेगाकरं वाक्यं सत्यं प्रियहितं च यत्। स्वाध्यायाभ्यसनं चैव वाङ्मयं तप उच्यते।।
मनः प्रसादः सौम्यत्वं मौनमात्म विनिग्रहः। भावसंशुद्धिरित्येतत्तपो मानसमुच्यते।।

Worshipping of the gods, the *brāhmins* and the preceptors; cleanliness and uprightness; celebacy and non-violence-these are spoken of, as being the penances carried out through one's body. Unexciting speech, truth and what is wholesome to whom one likes and the practice of self-study - these are spoken of, as the penance carried out through words. Serenity of the mind, mildness, silence, self-restraint, purification of one's sentiments - such a (type of) penance is spoken to be a penance carried out through the mind.

श्रद्धया परया तप्तं तपस्तत्त्रिविधं नरैः। अफलाकाङ्क्षिभिर्युक्तैः सात्विकं परिचक्षते।।
सत्कारमान पूजार्थं तपो दम्भेन चैव यत्। क्रियते तदिह प्रोक्तं राजसं चलमधुवम्।।
मूढग्राहेणात्मनो यत्पीडया क्रियते तपः। परस्योत्सादनार्थं वा तत्तामसमुदाहृतम्।।

A penance carried out with faith is of three kinds among the people. What is carried out with no intentness on the fruit thereof is considered as being *sātvic*. A penance that is carried out just to secure hospitality, prestige and worship, with pelf and arrogance; fickle and unsteady - this is considered to be *rājasic*. A penance that is carried out with a wrong preconceived notion of oneself; with tormentings; and to bring about a destruction of others - that is illustrated to be *tāmasic*.

दातव्यमिति यद्दानं दीयतेऽनुपकारिणे। देशे काले च पात्रे च तद्दानं सात्विकं स्मृतम्।।
यत्तु प्रत्युपकारार्थं फलमुद्दिश्य वा पुनः। दीयते च परिक्लिष्टं तद्दानं राजसं स्मृतम्।।
अदेशकाले यद्दानमपात्रेभ्यश्च दीयते। असत्कृतमवज्ञातं तत्तामसमुदाहृतम्।।

The gift that is given solely because it is to be given ; and what is being given to one who does not offer any benefit in return; with full knowledge of the place, the time and the recipient - such a gift is considered to be *sātvic*. What is being given so as to secure a return benefit or with intentness on the fruit thereof or with all tribulations - such a gift is regarded to be *rājasic* . What is given in improper place or time and, to an improper recipient, with no sanctification and knowing nothing about it - that is illustrated to be of the *tāmasa* variety. 17.2-22.

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18 Astrology and Medicine, Mantra Sastra, Music and Medicine

(In this Chapter, we include references to a few unique aspects of Indian learning that are related to Medicine, essentially tangentially. The subject is dealt with, rather cursorily and mostly by quotations from Books in English, rather than Sanskrit.)

A. Astrology and Medicine

1. (*some basic statements*)

"Astrology is the most ancient of all sciences. It is not a science like Mathematics, Botany, Zoology, Chemistry or Physics, the study of which requires strict adherence to the worlds' conventionalities of commonsense reasoning and ordinary logic. Astrology comprehends something higher, mysterious and subtle. It is not a mere appeal to the reasoning faculty of man but it is an appeal to his hidden powers and capacities. Astrological predictions cannot be simply based upon strict hypothetical principles or vague guesses but a certain amount of intuitive capacity must be brought to bear upon such attempts."

"Astrology relies more upon the skill and intuitive capacities of the interpreter than upon complicated rules. It gives a sketch of life. It is a mirror in which one's own figure is clearly reflected. Astrology comprehends the manifestation of a sort of relationship among all objects in nature, animal, vegetable and mineral. It records the interaction of influences of all things, visible and invisible. While Ayurveda ranks as Upaveda, Jyotisha or Astrology is one of the Vedangas. It was not a mere accident that distinguished practitioners of one of these arts were generally proficient in the other also."

"This science had been cultivated to a high degree of perfection by the Hindus long before the so-called period of authentic history. Their researches may be brought under the following three important divisions:- (1) Parāśari, (2) Jaimini and (2) Tajaka. Almost all astrological books in India are after Parāśara who is said to have lived before the dawn of Kali Yuga (more than 5,000 years ago)."

"Astrology must not be confused with fatalism, witchcraft, palmistry and card-shuffling. It interprets what it conceives to be the future of man as moulded by his previous Karma and indicated by the planetary positions at the time of birth."

"When one has acquired a thorough knowledge of the everlasting and ever changing influences of the stars, he will be able to prognosticate correctly the mental and physical qualities of any man and the fortunes and misfortunes that await him and his progress in the world whose actual moment of birth is accurately known."

"By thus knowing the future correctly, man can so create an environment that, he can cope with the adverse periods of his life and alleviate the evils, indicated by the planets to a great extent. The human will is free to a certain extent and advance knowledge of the future can enable one to mitigate many evils. There is a proverb: "Fools obey planets while wise men control them. "

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2. (*āyurdāya or longevity*)

"Astrologers, not the rank and file, but those really well-versed in the science, do hold that they can afford the physician a certain prognosis. An astrologers's work in this respect is priceless in value when compared to that of the doctor."

"The span of human life can be brought under four important divisions. They are:-

1. Balarishta (infant mortality)- The combinations of planets rendering the child to die before it is 8 years.
2. Alpayu (short life) -Dealth between 8 and 32 years.
3. Madhyayu (middle life) -Takes the life as far as 75 from the 33rd year.
4. Purnayu (full life) -From 75 to 120.

Some authors hold that Madhyayu extends from 32 to 70 and Purnayu extends to 100 years. But this clasification does not seem to have won geneal acceptance as the natural span of life is 120 years according to Vimshottari Dasa and consequently, Purnayu must extend to this limit."

(It is interesting to note that the full span of life spoken thus in Astrology, is exactly the same as held an Ayurveda, by both Caraka - whose total chapters are 120, and Susruta. This also indicates the real cultural oneness of Indian learning).

3. *medical astrology*

"Medical astrology is a part of the grand celestial science dealing with the several zodiacal, planetary and stellar influences which affect the health, constitution, functions and habits of life. In fact, Medicine is a branch of astrology. This conclusion is clear on its very face. Configurations of planets in the heavens in certain angular positions emanate certain forces or energies, which, when they are not in harmony with the energies of an indivudual, bring about certian disturbances in his physical and mental dispositions. To avert the evil influences of planets, the ancients contemplated upon discovering remedies, and the science of Medicine was gradually founded and developed in this manner."

"Each sign in the zodiac represents a certain part of the human body and the diseases peculiar to it and each planet also indicates certain types of diseases. Diesase and death are due to the disturbances in the laws of proportions and conjuction of natural forces emanating from the planets and the times in which these disturbances occur, can be previously ascertained and adequate provision made to arrest or minimise such evil influences."

"The planetary positions at birth clearly indicate the nature of the diseases one would suffer from, when and how they would affect us and how best to alleviate them."

"Each planet is given control over some humour (dosha) causing disease and the type and seat of disease depend upon the nature of the planet and the particular sign occupied by it and the period of suffering is denoted by the Dasas and Bhuktis of such a planet."

Diseases and signs : *Aries* - Brain derangement, headache, fevers like ague, malaria, sleeping sickness, apoplexy, insomnia, eye troubles, pyorrhea. *Taurus* -Obesity, abscesses, swellings in the neck, goitre. *Gemini* -Consumption, pneumonia, rheumatism, asthma. *Cancer*-Dropsy, small pox, flatulency, cancer. *Leo*-Digestive troubles, dyspepsia, diabetes, locomotor ataxia, swoons, fainting. *Virgo*-Constipation, masturbation, arthritis, anus troubles, venereal complaints. *Libra* -Bright's disease, lumbago, nephritis, renal calculi. *Scorpio* - Fistula, ulcers, nervous troubles,

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heamorrhoids, rectal affection. *Sagittarius* - Gout, paralysis, sudden fits, troubles in the hip. *Capricorn* - Cutaneous troubles, leprosy, leucoderma, tooth ache, elephantiasis. *Aquarius* - Nervous diseases, spasmodic eruptions. *Pisces* -Consumption, tuberculosis, mucuous troubles and tumours. "

"It may be asked whether the ancient Hindus had any knwoledge of these diseases; if not, how could their rulership by the different signs and planets be ascribed ? in the Ayurvedic textbooks a number of these diseases are elaborately dealt with. In many of the astrological works, in giving combinations for the occurrence of different types to diseases, the authors have hinted here and there the zodiacal signs which have governance over them." (1-3- from Hindu Predictive Astrology, B.V. Raman).

4. जाते कुमारे सति पूर्वमार्यैरायुर्विचिन्त्यं हिततः फलानि। विचारणीया गुणिनि स्थिते तद्गुणाः समस्ताः खलु लक्षणज्ञैः ।

The first thing to be done when a son is born is to deeply consider the (predictable) span of his life. If the nativity is found to have some merits (as well), these ought to be investigated (further) in full by persons proficient in the science of characteristics (Astrology and Physiognomy?) 13.1

5. आद्ये चतुष्के जननीकृताद्यैर्मध्ये च पित्रार्जित पाप संघैः ।
बालस्तदन्त्यासु चतुः शरल्सु स्वकीयदोषैः समुपैति नाशम् ।।

If the child dies in the first four years, it is because of the commitment (of sins) by the mother. If it is in the middle four years it is due to the accumulated sins of the father. If it comes by its death in the last four years, it must be due to its own sins (in a previous birth?)

6. अष्टौ बालारिष्टमादौ नराणां योगारिष्टं प्राहुरार्विंशतिः स्यात्। अल्पं चाद्वत्रिंशतं मध्यमायुश्चासप्तत्याः पूर्णमायुः शतान्तम् ।।

The first eight years in men's lives is the period of *bālāriṣhta* (the ill omens of the infant). Ills that affect the children till twentieth year, they say, is the period of *yogāriṣhta* (evil brought by planetary conjunctions). It is called *alpāyus* or short spanned, if the period extends to thirty two. It is called *madhyamāyus* or middle spanned if the period extends to seventy. (This is what Suśruta also holds). It is *purṇāyus* or full spanned if it extends to hundred years. 13.6

7. रोगस्य चिन्तामपि रोग भावस्थितैग्रहैर्वा व्ययभृत्यु संस्थैः ।
रोगेश्वरेणापि तदन्वितैर्वा द्विव्यादि सम्वाद वशाद्वदन्तु ।।

"Anything about diseases ought to be divined through (1) the planets posited in the 6th house, (2) those posited in the 8th and 12th houses, (3) the planet owning the 6th house or (4) those in conjunction with that planet. The particular disease may be predicted if the same happens to be signified by two, three or more independent yogas." 14.1

8. पित्तोष्ण ज्वरतापदेहतपनापस्मारहृत्क्रोडज व्याधीन्वक्ती रविर्दृगार्त्यरिभयं त्वग्दोषमस्थिस्रुतिम् ।
काष्ठाग्नयस्त्रविषार्तिदारतनयव्यापच्चतुष्पाद्भयम् । चोरक्ष्मापति धर्म देव फण भृद्भूतेशभूतं भयम् ।।

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(*an illustration*)

High fever dominated by vitiated bile, burning of the whole body, epilepsy, heart-disease, eye-trouble, danger from enemies, skin-disease, lucaria (*astihisruti*); danger from wood, fire, weapon and poison; trouble to one's wife, children and fear from quadruped, thief, the sovereign, the God Yama, serpent and God Siva, - all these may be caused by the Sun. 14.2(4-8, from Phaldeepika ed. V. Subrabmanya Sastri B. Physiognomy - Sāmudrika śastra

9. All the marks on the body formed the subject matter of this branch of knowledge and having originated from Samudra came to be called after his name. What we call Palmistry therefore forms but part of the above". P.2

10. "The guiding principle in this system is expressed beautifully in the following lines:. धर्माधर्म परीपाको लेखाभिर्व्यज्यते नृणाम्, and अस्याः तज्जन्म निकृत पुण्य पापानुरूपतः । वृद्धिह्रासौ यतः तस्मात् रोहिणीति निगद्यते।।

"The hand being the prized organ of the body the lines on the palm derive special significance as prime indicators. It is to be understood that faultless lines will indicate auspicious results and faulty ones the opposite. The use of the word Dharma in its largest sense in this connection denotes the highest regard and esteem in which our ancients held this science. Indeed the lines on the palm are described as *adhyātma jyotis* while the planets and stars, the astrological counterparts, as *bāhya jyotis* - the twin manifestations of God." p.3

Code of conduct

"When such a high ideal is set for the science, it is no wonder that our ancients prescribed the highest code of conduct for the person who attempts to interpret the lines which are no less than *dharma* indices; for should he not be larger than his work ? Here in outline is the code for the palmist according to the Kārtikeyan school:

The practising palm - reader should observe all the *niyamas* prescribed in *yoga śastras*. He should be an expert in the knowledge of examining breath; he must be able to interpret the *cheṣṭas* which are three-fold, correctly; he must have expert knowledge of omens; he must have learnt the *purāṇas* and *itihāsas*; he must be a strict follower of truth; he must be kind and considerate to one and all; he must be a good astrologer; he must be an ardent devotee of Lord Parameshwara; he must have a contented heart; he must be good in arguments; he must have learnt the science of *śāreeraka śāstra* at the feet of his *guru* and obtained his blessings." p.3,4.

11. अनामिका पर्वमतिक्रमेद्धि चेत् कनिष्ठिका वर्ष शतं स जीवति।
समेत्वशीतिर्विषमे तु सप्ततिर्यवार्धहीने खलु षष्ठिमादिशेत्।।
बहु रेखो बहु क्लेशी स्वल्परेखस्तु निर्धनः । रक्तांगो घनमाप्नोति शुक्लांगो प्रेष्यतां व्रजेत्।।

an illustration; longevity

If the little finger extends beyond the top joint of the ring finger, longevity is hundred years. If it is equal in height to the top joint of the ring finger, age is ninety. If it stops slightly below that joint, age is seventy. If it stops by half a Yava below the joint, he lives for sixty years only. p. 17.

Too many lines on the hand create too many anxieties. Too few lines make a man penniless. Reddish colour in the body makes a man wealthy. Whitish ones will

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confer bondage. P.18 (9-11. from Sariraka Sastra by V.A.K. Ayer D.B.Taraporevala Sons. (1975).

6. Mantra Sāstra

(*Mantra śāstra* or the science of Incantation and utilising it for therapeutic purpose is linked with the philosophy of yoga wherein the *sādhaka* or the student unites his individual self with the power of the universal self and thereby derives unique powers which he may utilise for his own effulgent health and also for curing the ills of the world, physical, mental or sociological. There is a considerable literature in English by Western as well as Eastern modern authors attempting to interpret the nuonces of this ancient thought in a way suitable to the thinkers of modern scientific age. Only one example is given below viz., from Sri Pratyagatmananda. We meet here with quite a few characterislic concepts for eg. the *naḍis* , the *iḍa* , the *pingala* and the *suṣumna*, the last with its *cakars, mulādhara* in the sacral plexus ascending upto to *sahasrāra,* in the head. Attempting to translate these concepts to their neurological correlations however is not very easy).

"Consciously or unconsciously, sefl-realization has been accepted as the common as well as the fundamental object of human pursuit and endeavour. But the two terms —'self' and 'realization'--have not meant the same thing always and for all... The difference, naturally, has hinged on the fact whether one is looking at a thing from 'outside 'and 'aside' or from 'inside' and 'straightway'; and, consequently, whether one is having a 'core', 'kernel', and whole view of the thing, or only 'crust', sheath,'husk', and segmentary view. It is the former which gives one, so it has been claimed, the true view - the true Self or *Atman*. Two views, so constrasted may be called the whole integral view, and partial, cross-sectional view." p.2.

"That the inside and integral view of any object, in our minds or outside, is necessary and to a certain extent possible, is a common position of both science and philosophy...Our sense experience and our ordinary 'subjective' experience give us a 'surface' picture of things and relations - or, to employ an ancient and significant figure of speech, - they show us the *nemi* ('outer orbit or circumference'), but conceal practically from our view the *āras* (the connecting radii') and almost always, the *nābhi* ('the navel - the central origin and support'), without knowing which nothing is truly and really known, and which being known, all is basically and realistically known. *Tasmin viṁāte sarvamidam viṁātam bhavati.* That *nābhi* is , or opens to, the *ātman* in all things." p.3.

"Both science and philosophy move forward to the search and finding of the *nābhi* or *ātman* in things. For this, they seek and have to find the connecting and leading 'lines' - the aras. Whether it be a dew-drop, a radio-active atom, the germ cell of a plant or an animal, a simple idea or feeling or a complex in the mind, the path of enquiry starts with the *nemi*, the surface picture, the current course of an event, the 'normal' behaviour of an object; it is in that sense 'gross' (*sthūla*); its appearance poses a problem (what and how); its exhibition stimulates enquiry which presses for more and more intelleigible information and satisfying explanation - for knowledge assuring increasing validity and value. So the mind which must know and satisfy itself cannot simply go the round of the perimeter of an object or relation as commonly presented to it; it seizes upon the suggestive and significant points in the passing picture which may open into the 'ground picture' giving the significant, informing basic outlines. In common language, it raises the question - what does

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this movie show for me mean and how has it to be appreciated ? This latter leads to the exploration of *ṛtam,* principle or law." p.3.

"Or, varying the figure, the *nābhi-āra-nemi* scheme : if it be asked - where does power come from so as to be available on this level of operation ? - the answer is, *mantram,* which operates the matrix or root where power lies condensed. It is the *that* or *what* of our enquiry. If it be asked, how is it made available in the requisite kind and degree for the production of a desired result - the query may resolve itself into two parts; one relating to the pattern or design of power application; the other to the rule and method of application: we may call the two *wherewith* and *whereby.* These together contrive to lay out and work the *how* or *thus* line that fruitfully negotiates between where we begin work and where we should end". p.12

"We can perceive that such ideas of *mantra, yantra* and *tantra* bear a universal import having unrestricted application in all fields." p. 12

"No concentrated power in any field is worked out nor is diffused power concentrated without *mantra;* whether power evolves or involves itself, it aims at a limit which, in the sense of expansion, is *nāda,* in that of concentration, is *bindu.* And as we have seen, the aspect of power that negotiates between the two limits as the factor of harmonic variation and acceleration making the process conformable to the *ṛtam* of *chandah* (Law of Harmony), is *ardhamātra.* This last is what makes the cosmic process, on the whole and in every detail, *ṛdhyamāna* (accelerating in the process of plus or minus) and *chandoga* (conforming to *chandah* or harmony.) If it be asked - what is the power which thus works itself out and works itself in, as an unbounded expanding universe (*nāda*) and as in infinitesimally small, yet infinitely potent, universe of *bindu*- the seed of the universe ?....The answer is - Ground Reality as Basic Power of Movement - *Prāṇa Bhahman.* It should be noted here that *sastra* has called *bindu* not only *viśva-bīja* (world-root) but perfect universe also. And we can perceive why. *Bindu* is Power -Point which as patency, as actually exhibited or manifested, is nil (*śūnya*), and as Potency full (*Pūrṇa*). It is where the two opposite senses of function, plus and minus, meet and merge as the Neutral Point (*Bindu Brahman*), and from where they emerge and evolve." P. 12

"But we can make a distinction between *mantra* as a general category covering all the provinces of world manifestation, physical, vital, and mental, and *mantra* itself regarded as seed power-*bīja-mantra.* This is *Mantra* par-excellence. This latter is what can work up power from a perfect, unlimited source which *bindu* is, or from any matrix closely akin to *bindu* such as the *nābhi* is. When Brahman as *prana,* wakes up and energises and functions from *bindu* where it may be supposed to be 'infinitely coiled-up', it is *nāda brahman*--- the patent, manifest wonder of the universe as manifesting. As infinitely coiled-up power,it is *mahā-kuṇḍalini.* A *bīja-mantra* is what can work up this *mahā-kuṇḍalini,* the magnum matrix as we have called it. It can go into and work up from the Fundamental Source itself. And it can do this in the *ṛju* and *ṛddha* - direct and adequately efficient way. The name for such 'direct homeline' is the Path of *Suṣumna*" p 12-13.

"The two 'wings' of *hamsah* (the symoblic 'swan') move in integrity of power and functional balance so that creation as a whole and in every detail may be in good order making for steady, continued progress (*abhyudaya*). One wing is what takes in and assimilates power and, thereby, nourishes and builds; the other wing is what takes out power from its potential store as kinetic energy, supplies this as available to every sort of 'power station', atomic or astral, vital or mental, and thus helps production as well as reduction in every field or sphere of the universe. The

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former is the 'lunar' and the latter is the 'solar' principle - the mystic *Iḍa* and *Pingala*. To make these two function in harmonic order is the object of *Haṃsa-yoga*. By this *yoga* the world as also the individual will be assured a balanced and progressive economy, physically, vitally and mentally.

By it, Creation will 'breathe' freely, its 'heart' beat soundly; its 'soul' will toil fruitfully and travel to its goal hopefully. *Jagat svasthyāmatīvāpa* " P. 13. all, from Sadhana for self realisation. Pratyagatmanada

D. Music and Medicine

(Musical therapy is a young discipline being well cultiivated in some modern countries, for e.g. France and the United States of America. This attempts to utilize the effect of music for curative purpose. In Indian literature on *sangītaśāstra*, there is a rich technical material on music which is worth being carefully studied and properly utilised. Dance therapy is another highly promising modern innovation of ancient ideas. This envisages utilising the recreative value of dance rhythms and decors in rehabilitation of the disabled where the subjects would willingly take to repetitive exercises when presented in a dance format instead of the usual monotonus format of physical exercises. Śāradatanaya's Bhāvaprakā-śanam dealing with the nuances of the physical movements involved in diverse emotional expressions may give some useful material to interested workers in this area. Here we confine to just a few quotations on music. Śarngadhara's Sangitaratnākara describes the *cakras* in the human body and specifies the particular *cakra* in which one should meditate for *siddhi* in music and extols the greatness of music-*gīta* one of which is the sedative power to put a baby to sleep.)

"The seven *svaras* of the *saptaka* current to-day throughout the whole of India are in the order of ascent from the note which has now become the Indian tonic: *Shadja, Rishabha, Gandhāra, Madhyama, Panchama, Dhaivata, Nishādha*" p.32

"Hindu musical mythology refers each note to the tone of some animal. The cry of an animal tends to be always on the same note; and these names were intended no doubt to indicate in the first instance absolute pitch, and were later transferred to relative pitches. *Shadja* is said to be the sound produced by the peacock at its highest rapture. *Rishabha* is said to represent the sound made by the cow in callling here calf. *Gandhāra* is the bleat of the goat. *Madhyama* is the cry of the heron. It is also called the note of nature, being identified with the sound of falling water, the roar of the forest and the buzz of great cities. *Panchama* is the note of the *kokila* or Indian nightingale. *Dhaivata* is the neigh of the horse, and *Nishādha* the trumpeting of the elephant: the latter indicating clearly the lower note *Ni*, which was originally the starting point of the scale. Lower *Nishādha* is the first note of the *Sāman* scale, and so the elephant has been called *Sāmaja* or 'born of the *Sāman*' P.33

"*Rāgas* are different series of notes within the octave, which form the basis of the Indian melodies, and are differentiated from each other by the prominence of certain fixed notes and by the sequence of particular notes'. We may perhaps find in the term 'melody-type the best way to transcribe rāga in English." p.39

"Another important matter is the time of day at which different *rāgas* should be sung. Each *rāga* is connected with a special mood or passion, and it is therefore fitting that each should also have a special time appropriate to it." p. 62

"The musical character of the different *rāgas* also suggests certain explanations, which have been very carefully worked out by Mr. Bhatkhande for Hindusthani

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ragas. The four determinant musical factors for the time theory according to him are the following : the position of the *amśa*, the presence or absence of *Tīvra Ma*, of *Komal* and *Tivra śrutis*, and the omission of certain *svaras*."

The day is divided into the following periods :-

1. *Sandhi prakāś*, both morning and evening, the conjunction of dark and light, i.e. sunrise and sunset, between 4-7, both a.m. and p.m.

2. Before and after *Sandhiprakāś*, from 10-4 and 7-10, both a.m. and p.m.

This gives altogether six periods in the twenty-four hours. He works out the following principles:

1. *Rāgas* having *Ri Komal* and *Ga Tīvra* are *Sandhiprakāś rāgas*, i.e. the *Bhairava, Pūrvi* and *Marva* groups.

2. *Rāgas* having *Ri Śuddha, Dha Śuddha*, and *Ga Śuddha* come after the *Śandhiprakāś* i.e. the *bilaval, kalyāṇi* and *Khamāj* groups.

3. *Rāgas* having *Ga Komal* and *Ni Komal* come before *Sandhiprakaś*, i.e. the *Kāphi, Bhairavi* and *Aśavari* groups.

The question as to whether the *raga* should come in the first or the second half or the day is decided by two factors, the position of the *amsa*, and the use of *Tivra Ma*.

4. *Ragas* having their *amśa* in the first tetrachord (*Purvānga*) come between noon and midnight. They are called *Purva rāgas*.

5. *Ragas* having their *amśa* in the second tetrachord (*Uttaranga*) come between midnight and noon. They are called *Uttara rāgas*.

Ma and *Pa* are not counted as in either tetrachord.

6. Ma *Tīvra* also gives an indication of the time of the *rāga*. For this reason it is called *Adhvadarśak*, or 'showing the way'. It comes in the evening *Sandhi* group and continues into the next group. It does not, however, occur in the morning groups, unless attended by a dominant *komal Ma* in a few of the early morning *rāgas* e.g. *Hindol*. The only *rāgas* sung during the day and taking *Ma Tīvra* are *Todi, Gaur-sāranga*, Multāni; and there is some doubt about these. Skilful musicians sometimes introduce Ma *Tīvra* as a passing note into other night *rāgas* without in any way offending musical susceptibilities." 62

7. An additional indication of time is found in the tansilient *ragas*. Evening ragas do not as a rule omit *Ga* and *Ni* altogether, and morning ragas do not omit *Ri* and *Dha*" p. 63-64

"*Śrirāga* is to be sung in the dewy season, and represents love. *Vasanta* is the *rāga* of the spring, and is allied with the emotion of joy. *Bhairava* is the raga of asceticism and reverence. *Panchama* is the *rāga* of the calm night. *Megh* is the *raga* of the rainy season and is allied with the emotion of exuberant joy, such as the coming of the rainy season means to so many in India. *Nattanarāyana* is the *rāga* of the battle and fierce courage." p. 64-65

"All the permutations and combinations are performed on the basis of the notes of which the *rāga* is primarily composed and any deviations are looked upon as discordant and are scrupulously guarded against. *Todi* and *Bhairavi* represent majesty and impress one like the march of a stately king, decked in all his regal glory and spreading the pomp and circumstance of his lofty position, a grand and sublime spectacle. *Asavari* and *Punnāgavarali* are wrapped in melancholy, like one pleading the cause of a sovereign unjustly deposed from his throne and power. *Girvāṇi* and *vasanta* come serene and subdued, like a sage sitting in a lonely forest or on a mountain, calmly contemplating the beauty of the universe. *Mohana* and

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Pūrvakalyāni appear like a coy maiden hiding her love, as a rose does its blooming petals beneath its bower of green, but withal conscious of its beauty and attractiveness. *Huseni* seems fascinating in it sadness, like a maiden estranged from her lover or spurned by him, cursing the woeful hour which parted her from his company or eloquently pleading the justice of her cause. *Bihāgada* comes arguing and resentful and remonstrating. *Nādanāmakriyā* calm and thoughful, appears like Socrates or Plato preaching the sublime truths of philosophy to his disciples. *Nilāmbari* and *yadukula- kāmbodhi* come submissive and imploring, melting the soul into streams of tender devotion, like a true *bhakta* full or prayers and tears in the presence of God. Thus each *rāga* comes and goes with its store of smiles or tears, of passion or pathos, its noble and lofty impulses, and leaves its mark on the mind of the hearer." p. 65 all, From The Music of India. H.A. Popley, Association Press, Calcutta. 1921.

सर्वेषामेव लोकानां दुःख शोक विनाशनम्।
यस्मात् संदृश्यते गीतं सुखदं व्यसनेष्वपि।।

Singing bestows happiness even in times of grief for all types of people whatsoever, since it is seen that it destroys unhappiness and sadness.

धर्मार्थकाममोक्षाणां साधनं गीतमुच्यते।
यतस्ततः प्रयत्नेन गेयं श्रोतव्यमेव च।

One should take efforts and sing and hear music, since singing is the means of dharma, fulfiment of personal desires and the final liberation.

रक्तं पूर्णं प्रसन्नं च व्यक्तं व्युत्कृष्टमेव च।
अलंकृतं तथा श्लक्ष्णं मधुरं सुकुमारकम्।।
तगदीतं नवधा प्रोक्तं सम्यगीतविचक्षणैः।
तस्य रुपाणि वक्ष्यामि पृथक्त्वेन यथाक्रमम्।।

The passionate, the complete, the graceful, the highpitched, the decorated, the mellifluous, the sweet and the delicate - singing is said to be of these total nine types by experts in musicology. I shall (now) tell their individual characteristics in this order. 1. 21,22.

गीतोपायास्त्रयः प्रोक्ता गीता शास्त्र विचक्षणैः।
शक्ति र्व्युत्पत्तिरभ्यासो न चतुर्थो कथंचन।।

The strategems of learning to sing are said to be three by musicologists: the requisite energy, the necessary innovativeness and constant practice. There is nothing fourth. - all, From Gitalamkara. Bharata.

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19. Historical Background. References from the Vedas

1. "Nowadays everybody blames those who constantly look back to their past. It is said that so much looking back to the past is the cause of all India's woes. To me, on the contrary, it seems that the opposite is true. The more the Hindus study the past, the more glorious will be their future and who ever tries to bring the past to the door of every one, is a great benefactor of nation". "The Indian nation cannot be killed. Dealthless it stands and it will stand so long as that spirit shall remain as the background, so long as her people do not give up their spirituality. Beggars they may remain, poor and poverty-stricken, dirt and squalor may surround them, perhaps throughout all time; but let them not give up their God, let them not forget their past and let them not also forget that they are the children of sages and heroes." -Swami Vivekannanda in My Master.

2. "It has been rightly said that the saying 'for what is a man advantaged if he gains the whole world and loses himself or be cast away?' applies not only to the individual but to the racial soul. This self-maintenance of the Indian civilization is also for the world's good. Its future advance depends on the guarding of all its spiritual and cultural wealth, not by the neglect or abandonment of any of it.

India lives because of the world-purpose, which she has to fulfil; because the world will be enriched by what she can give to it. The Indian youth of to-day are the custodians. Proud of their guardianship, let them cast aside false shame of themselves and of their own and also all fear of sloth" - Justice Sir John Woodrofie.

3. "We find that India was visited for the purpose of acquiring knowledge by Pythagoras, Anaxarches, Pyrrho, and others who afterwards became eminent philosophers in Greece. Some of the doctrines of the Greeks concerning nature are said to have been derived from the Indians". Dr. Enfield...History of phillosophy. Vol. I.p. 65

a. *opinions of foreigners*

(i) *general*

4. "India according to the concurrent opinion of all writers, is the most agreeable abode on earth and the most pleasant quarter of the world. Its dust is purer than air, and its air is purer than purity itself. Its delightful plains resemble the garden of paradise. If it is asserted that paradise is in India, be not surprised because paradise itself is not comparable to it.." - Abdulla Wassaf. 14th Century A.D. in his Tazjiyat-ul-amsar.

5. "It was India's mighty religion that formed her claim to greatness amongst the world's people. Rome had passed and left her ruins; and Greece has passed and left her literature; India older than Greece or Rome - India that was old before Egypt was born - India that was ancient before Chaldia was dreamt of - India that went back thousands of centuries before Persia had come to the front, - India was still a living nation, when the nations of the past were dead, and their dust had vanished

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from the surface of the globe. Why was it that amongst such ancient civilizations hers alone was living at the present day ? Why was it that amongst so many ruins India had still a future, as well as the memory of the past ? In the history of the world, India has lived because India's was the spirit of Humanity which could not die. She was the earliest of the Aryan peoples, the first born of the mightiest races.

India is the mother of religion. In her are combined science and religion in perfect harmony, and that is the Hindu religion, and it is India that shall be agaiin the spiritual mother of the world." -Dr. Mrs. Annie Besant. India and its Mission. Lecture 1914 G.

6. "No nation on earth can vie with the Hindus in respect of the antiquity of their religion. It is there (Aryavarta) we must seek not only for the cradle of the Brahmin religion but for the cradle of high civilization of the Hindus, which gradually extended itself in the West of Ethiopia, to Egypt, to Phoenicia, in the East to Siam, to China and to Japan, in the South of Ceylon, to Java and to Sumatra in the north to Persia, to Chaldia (चोल द्वीप) and to Colchis whence it came to Greece and to Rome and at length to the remote abode of the Hyperboreans.

It appears that the Hindu Settlers migrated to Scandanavia before the Mahabharat war taking their philosophy and religion with them but were soon absorbed by the natives owing to their inferior numbers. Several names of Hindu mythology are recognised in Egypt thus : Ammon the Supreme God of the Egyptian (Haya Gopatians) corresponds to AUM (ओम्) of the Hindus, the Brahmanical Shiva is found in the temple to which Alexander the Great made his pilgrimage from Egypt and which yet bears this name. These resemblances between the two systems of religion prove that the one is derived from the other". Count Bernord, who proves conclusively that the Hindu religion is the source of the Egyptian religion (as follows):-

"(1) It is testified to by Herodotus, Plato, Solon, Pythagoras and Philostratus that the religion of Egypt proceeded from India.

(2) It is testified by Neibuhr, Valentia, Champollian and Waddington that the temples of upper Egypt are of greater antiquity than those of lower Egypt; that the temples in Meroe are more ancient than those of Elephantine and Thebes (Shiva); these more ancient than the temples of Tentyra and Abydos; and these again more ancient than those of Memphies, Heliopolis and Sais, that consequently the religion of Egypt according to the testimony of those momuments, proceeded from the south which cannot be from any other land than from Ethiopia and Merdo to which country it came from India as testified by the above named Greek authorities.

(3) The chronicles founded in the temples of Abydos and Sais and which have been transmitted to us by Josephus, Julius Africanus, and Eusebius all testify that the religious system of the Egyptians proceeded from India.

(4) We have Hindu chronologies (besides those of puranas concerning the Yuga which are nothing but astronomical allegories) which go still further back in time than the tables of the Egyptian kings according to Manetho.

(5) There is a tradition among the Abyssinians (Ab-u-Sin, Water of the river Sindh + ia = country) which they say they have possessed from time immemorial, and which is still equally received among the Jews and the Christians of that country, that the first inhabitants (they say Cush, grandson of Noah (Mnuh = मनुः = मनु with his family) came over the chain of mountains which separates the highlands of Abyssinia from the Red Sea and the straits of Babil Mandeb from a remote southern country. The tradition further says that they built the city of Axum early in

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the days of Abraham and that thence they spread themselves following the river Nile downwards until they become (as Josephus says) Meroetes namely the inhabitants of that part of Nubia, (now = New + ia = the new country) which being situated between the Nile (नीला) and its conflux the Atbara (अत्वरा no hurry) forms what is commonly called the island of Meroe (मेरु) from which they spread further down the river to Egypt (Aegoptia of the Greeks and Haya + Gupta + ia हयगोप्तीय of the Hindus)". Count Bernord thus concludes "it appears from the above mentioned grounds that the Hindus have a greater claim to the primogeniture of religion and consequently to the primogeniture of civilization than the people of ancient Egypt".

"We have here (in Scandanavia) another proof that the myths of the Scandanavians are derived from those of the Hindus.

The Druids (द्रविड?) in ancient Britain appear to have been buddhistic Brahmins.

What may be said with certainty is that the religion of China came from India. The literature of India makes us acquainted with a great nation of past ages, which grasped every branch of knowledge and which will always occupy a distinguished place in the history of the civilization of mankind." Biornstierna Court in the Theogony of the Hindus.

"There priests (Druids), Brahmins of India, spread themselves widely through the northern regions of Asia even to Siberia itself, and gradually mingling with the great body ot Celtic tribes (Kalatoya people to the South of Kashmir) who pursued their journey to the extremity of Europe finally established the Druid that is Brahmin system of Superstition in ancient Britain. This I contend was the first oriental colony settled in these (British) islands". Rev. Thomas Price. Antiquities of India vi. p. 1 p. 246.

7. "If there is a country on earth which can firstly claim the honour of having been the cradle of the human race or at least the scene of primitive civilization, the successive developmeents of which carried into all parts of the anciet world, and even beyond, the blessings of knowledge which is the second life of man, that country assuredly is India". Cruiser, the eminent French savant.

8. "The influence of that civilization worked out thousands of years ago in India, is round and about us, every day of our lives. it pervades every corner of the civilized world. Go to America and you find there as in Europe the influence of that civilzation, which came orignially from the banks of the Ganges." Delbos, M., great savant of France.

9. "It is impossible to read the Vedant or the many fine compositions in illustration of it without believing that Pythagoras (Budhaguru) and Plato derived their sublime theories from the same fountain with the sages of India". Sir William Jones, in 'Is India Civilised?' Chap. VII, p. 160.

10. "If I were to look over the whole world to find out the country most richly endowed with the wealth, power and beauty that nature can bestow - in some parts a paradise on earth - I should point to India."

"In the study of the history of human mind, in the study of ourseves, of our true selves, India occupies a place second to no other country. Whatever sphere of the human mind you may select for your special study, whether it be language or religion or mythology or philosophy, whether it be laws or customs, primitive art or primitive science, eveywhere you have to go to India, whether you like it or not, because some of the most instructive materials in the history of man are treasured up in India and in India only." - Max Muller.

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11. "For, the case is this, that little smattering of knowledge what we have, is entirely derived from the East. They first communicated it to the Greeks, from whom the Romans had theirs. And after barbarity had spread itself over the Western world, the Arabians, by their conquests restored it again in Europe. And it is the wildest conceit that can be imagined for us to suppose that we have greater geniuses or greater application than is to be found in those countries" - Ockley, History of the Saracens, 1857, p. 337.

12. "What doth it profit a man to reign over a world for the most part enslaved, debased or destroyed ? Better to reign over life, comprehended, reverenced and embraced as one great whole, wherein he must learn how to co-ordinate its opposing forces in an exact equilibrium." Romain Rolland, Prophets of the New India.

13. "It was an astounding discovery that Hindusthan, a land over which so many conquerors had passed in wrath, and left their footprints as they went, possessed, in spite of the changes of realm and changes of time, a language of unrivalled richness and variety; a language, the parent of all those dialects that Europe has fondly called classical - the source alike of Greek flexibility and Roman strength. A philosophy, compared with which in point of age the lessons of Pythagoras are but of yesterday; and in point of daring speculation, Plato's boldest efforts were tame and commonplace. A poetry more purely intellectual than any of those of which we had before any conception; and systems of science whose antiquity baffled all powers of astronomical calculation. This literature, with all its colossal proportions, which can scarcely be described without the semblance of bombast and exaggeration, claimed of course a place for itself - 'it stood alone, and it was able to stand alone'." Taylor, W.C. in 'India in Greece'.

(ii) *medical*

14. "The people of India should be grateful to Col. King for having pointed out to them that they can lay claim to have been acquainted with the main principles of curative and preventive medicine at a time when Europe was still immersed in ignorant savagery. I am not sure whether it is generally known that the science of medicine originated in India, but this is the case, and the science was first exported from India to Arabia and thence to Europe. Down to the close of 17th century, European physicians learnt the science from the works of Arabic doctors; while the Arabic doctors many centuries before, had obtained their knowledge from the words of great Indian physicians such as Dhanwantari, Charaka and Sushruta. It is a strange circumstance in the world's progress that the centre of enlightenment and knowledge should have travelled from East to West, leaving but little permanent trace of its former existence in the East.

Now we are beginning to find out that the Hindu Shastras also contain a Sanitary Code no less correct in priciple, and that the great law-giver Manu was one of the greatest sanitary reformers the world has ever seen." Ampthill, Lord, Governor of Madras, while declaring open the Madras King Institute of Preventive Medicine, Feb. 1905.

15. "The surgery of the ancient Indian physicians was bold and skilful. They conducted amputations, arresting the bleeding by pressure, a cup-shaped bandage and boiling oil; practised lithotomy; performed operations in the abdomen and uterus; cured hernia, fistula, piles; set broken bones and dislocations: and were dexterous in the extraction of foreign substances from the body. A special branch of Surgery was devoted to rhinoplasty, or operation for improving deformed ears and

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noses and forming new ones, a useful operation which European Surgeons have now borrowed. The ancient Indian Surgeons also mention a cure for neuralgia, analogous to the modern cutting of the fifth nerve above the eyebrow. They were expert in midwifery, not shrinking from the most critical operations." Hunter, Dr. Sir William, Indian Gazetteer, India p. 220

16. "According to Greek tradition, Thales, Empedocles, Anaxagoras, Democritus and others undertook journeys to Oriental countries in order to study philosphy. The influence of Indian Philosophy on Christian Gnosticism in the second and third centuries seems at any rate undoubted. The Gnostic doctrine of the opposition betwen soul and matter, of the personal existence of intellect, will, and so forth, the identification of soul and light are derived from the Sankhya system. The division peculiar to several Gnostics of man into the three classes pnemnatikoi, psychhikoi and hylikoi is also based on the Sankhya doctrine of the three Gunas. Again, Bardesanes, a Gnostic of the Syrian school who obtained information about India from Indian Philosophers, assumed the existence of a subtle etheral body which is identical with the Linga Sharira of the Sankhya system. Finally the many heavens of the Gnostics are evidently derived from the fantastic cosmogony of later Buddhism."

"Sankhya Philosophy, for the first time in the history of the world, asserted the complete independence of the human mind and attempted to solve its problems by the aid of reason."

"In modern days Euopeans Surgery has borrowed the operation of rhinoplasty, or the formation of artificial noses, from India, where Englishmen became acquainted with the art in the last century."

"The effect of Hindu Medical Science upon the Arabs after about 700 A.D. was considerable, for the Khalif of Baghdad caused several books on the subject to be translated". - Professor Macdonell.

17. "Nothing in the legislation of Chandragupta is more astonishing to the observer, than this registration of Births and Deaths. And it is impossible to imagine an old fashioned Raja feeling anxious that birth and death among the high and low might not be concealed. Even the Anglo-Indian administration with its complex organisation and European notions of the value of statistical information did not attempt the collection of Vital statistics until very recent times, and always has experienced great difficulity in securing reasonable accuracy in the figures." Dr. Vincent Smith. Early History of India, 1900.

18. "In surgery too, the Indians seem to have attained a special proficiency and in this department European surgeons might, perhaps, even at the present day still, learn something from them, as indeed they have already borrowed from them the operation of rhinoplasty." Prof. Weber, History of Indian Literature, p.270.

b. *continuity of Indian culture*

19. "Among the numerous civilisations and cultures that flourished in the world there are only two (the Indian and the Chinese) that have survived and kept up a continuity of tradition, for four thousand years (if not more) in spite of recurrent invasion by foreign hordes like those by Persians, Greeks, Scythiane, Huns, Turks and notwithstanding internal conficts and convulsions. India absorbed such people and made many Greeks, Sakas and other foreigners adopt the spiritual ideologies of India and found for them a place in the Indian social fabric. Not only so, India could spread its literature, religion, art and culture, not by invasions or annexations but mostly by peaceful means viz., teaching, translation of Sanskrit works and

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persuasion, to Ceylon, Burma, Sumatra, Malaya, Java, Bali, Borneo, China, Tibet, Japan, Mongolia and Korea" (After P.V. Kane p. 617-18)

c. *Ayurvedic practices in recent past : 18th Century -remarks by contemporary European workers*

20. Surgery :"(In) Chirurgy (in which they are considered by us the least advanced) they often succeed, in removing ulcers and cutaneous irruptions of the worst kind, which have baffled the skill of our surgeons, by the process of inducing inflammation and by means directly opposite to ours, and which they have probably long been in possession of".

"Corroborating this and reporting on the prevalence of plastic surgery, Scott says" In medicine I shall not be able to praise their science very much. It is one of those arts which is too delicate in its nature to bear war and oppression and the revolution of governments. The effects of surgical operations are more obvious, more easily acquired and lost by no means so readily. Here I should have much to praise. They practice with great success the operation of depressing the crystalline lens when become opaque and from time immemorial they have cut for the stone at the same place which they now do in Europe. These are curious facts and I believe unknown before to us". Two years later he refers to the putting on noses on those who lost them and sends to London a quantity of caute, the cement used for uniting animal parts.

Inoculation against the smallpox seems to have been universal, if not throughout, in large parts of Northern and Southern India, till it was banned in Calcutta and other places under the Bengal presidency (and perhaps elsewhere) from around 1802-3. Its banning undoubtedly was done in the name of 'humanity' and justified by the Superintendent General of Vaccine inocluation in his first report in March 1804. 32 (See Report on the Progress of vaccine Inoculation in Bengal, Calcutta 1804).

Some aspects of indigenous plastic surgery were being practiced till recently in places as far apart as Kangara and Junagadh. (See S.C. Almast. History and Evolution of Indian Method in Rhinoplasty. Proc. 4th Internat. Con. on Plastic Surgery, Rome 1967).

The operation of inoculation called by the natives *tikah* has been known in the Kingdom of Bengal as near as I can learn, about 150 years and according to the Bhamanian records was first performed by one Dununtary a physician of Champanagar, a small town by the side of the Ganges about half way to Cossimbazar....p. 193.

Inoculations performed in Indostan by a particular tribe of Brahmins who are delegated annually for this service from the different colleges of Bindoolbund, Eleabas, Banaras, etc. over all the distant provinces; dividing themselves into small parties, of three or four each, they plan their travelling circuits in such wise as to arrive at the places of their respective destination some weeks before the usual return of the disease; they arrive commonly in Bengal early in February, although they some years do not begin to inoculate before March, deferring it until they consider the state of the season and acquire information of the state of the distemper....The inhabitants of Bengal knowing the usual time when the incoulating Bramins annually return, observe strictly the regimen enjoined, whether they determine to be inoculated or not, this preparation consists only in abstaining for a month from fish, milk and ghee...When the Bramins begin to inoculate, they pass from house to house and operate at the door refusing to inoculate any who have not, on a strict scrutiny, duly observed the preparatory course enjoined them....

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They inoculate indifferently on any part, but if left to thier choice, they prefer the outside of the arm, midway between the wrist and the elbow; and the same between the elbow and the shoulder for the females. Previous to the operation the operator takes a piece of cloth in his hand (which becomes his perquisite if the family is opulent) and with it gives a dry friction upon the part intended for inoculation for the space of eight or ten minutes, then with a small instrument he wounds by many slight touches, about the compass of a silver groat, just making the smallest appearance of blood, then opening a linen double rag (which he always keeps in a cloth round his waist) takes from thence a small pledgit of cotton charged with variolous matter, which he moistens with two or three drops of Ganges water, and applies it to the wound, fixing it on with a slight bandage and ordering it to remain on for six hours....The cotton which he preserves in a double callico rag, is saturated with matter from the inoculated pustules of the preceding year, for they never inoculate with fresh matter, nor with the matter from the disease caught in the natural way, however distinct and mild the species. He then proceeds to give instructions for the treatment of the patient (*omitted here*).....Since therefore this practice of the East has been followed without variation, and with uniform success, from the remotest known times, it is but just to conclude, it must have been originally founded on the basis of rational principles and experiment" (pp. 195-213) (*sufficiently detailed*). - From Indian Science and Technology in the Eighteenth Century (Some contemporary European accounts) by Dharmapal. Academy of Gandhian Studies, Hyderabad, 1984.

d. *quotations from "History of Indian Medicine", Girindranath Mukhopadhyaya*:

21. *an early bibliogarphy* "Prof. Wilson wrote on the early medical authors. Royle proved the originality of the Hindu medicine. His arguments for antiquity of Hindu Medicine are deservedly styled as epoch-making researches. Dietz has given in his Analecta Medica a long abstract from Ibn Osaibe's biographical work, on the Lives of Indian Physicians. In Ainslie's Materia Medica, some of the medical treatises are mentioned. In Wise's Commentary we find a list of the Hindu writers on medicine and their works. In Webers, History of Indian Literature, we have a fews pages on the medical texts of the Hindus. Cordier's Recentes Decouvertes Vagbhata and other contributions supply many informations on the subject. Dutt in the preface to his Materia Medica of the Hindus described some of the important works, and similarly we find them described by the Thacore Sahab, in his History of Aryan Medical Science, with an important bibliography at the end. Roth's monograph on Caraka and the notices of medical authours in st. Petersburg Dictionary supply us with important details. A more systematic description of the authors and their works, we find in Jolly's Medicine in the Encyclopaedia of Indo-Aryan Reserch (Grdr.). Hoernle's contributions "The Commentators of the Susruta Samhita" and "The Ancient medical Authors" in his Osteology, and his magnificent edition of the Bower MS, are invaluable aids to our study. The notices of the authors in Ray's History of Hindu Chemistry, and the preface in Junte's Vagbhata are repositories of useful informations on the ancient medical literature. In the Vanausadhi Darpana, Kaviraja Virajacarana Gupta, gives us an elaborate list of Ayurvedic books in Bengali, the important works being described in detail". pp. 2,3

(a much richer and a little more recent bibliographical account occurs in the Introduction of two authors, Hemaraja Sharma-Kāśyapa Samhita and Gananatha Sen, Pratyakṣa Śārirām).

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22. *need of studying ancient books*

"The study of the ancient books is very important in the construction of the history of Hindu medicine. "The history of medical liteature forms a very large part of medical history. If we open a standard history of medicine, it may seem in some parts as if it were little else than a history of books. One feels that this is not quite just as books contain but a small part of medical activity through all the ages. The author of a medical book is not necessarily a fair representative of his class. He may have been superior to the average. On the other hand, the mere fact that what he wrote has survived does not show him to have been a greater physician than others of his contemporaries who wrote nothing, or whose works are lost. Nevertheless since books are in the end more enduring than wrought metal or sculptured stone, medical writings are some times the only evidence we have of the state of medicine during long tracts of time. It is only from a diligent research into the Sanskrit books that we can expect to become acquainted with the medical science and learning of the ancient Hindus." pp 6,7

23. *comparative medicine*

"India is the best field for study of the comparative medicine. Here we daily find practitioners of the healing art, well-versed in the lore of their respective systems of treatment - European practitioners, Homoeopaths, Hakims, and Kavirajas or Vaidyas,. But this opportunity is not taken advantage by scholars. Literary contributions on Indian medicine are few and far between." pp. 31, 32.

24. *ancient writing on sanitation in India*

"The ancient books in India are written in Sanskrit language. As the classical language gradually became a dead lanugage, scientific writings and religious compositions became in course of time misunderstood. In the address to the graduates at the Madras University, 1898, we find the following remarks: "Those of you who have studied the larned shastras of your forefathers must have found ample room for opinion, that not only is modern sanitation compatible with caste, but that caste itself, although allied itself with religious observances, is a magnificent and elaborate system of sanitation.. But in the absence of the knowledge of Sanskrit in which these rules were conveyed, tradition, which has been the method of transmission from generation to generation, has led to no little distortion of the original dicta." p. 35

25. *Indian materia medica*

"It may not be unprofitable to glance for a moment at the ancient Sanskrit Materia Medica of a time long preceding the advent even of Mohammedanism in India, over seven centuries ago. I have quite lately found geat pleasure and no small instruction in a research into the old Sanskrit works dealing with the classification of vegetables and the utilization of their parts in medicine as practised by the physicians of India of the Puranic era some thirteen centuries ago. The elaborate directions for the collection of drugs and their subsequent manipulation is, strange as it may seem to European minds at least, not by any means unworthy of the methods of to-day, and you will perhaps be as astonished to learn as I was to find that some of the mistakes of the most ancient of these Sanskrit writings survive in some of the best books treating of the indigenous drugs of India at the present time. They show the great progress which the ancient Hindus had made in the healing art. Minute instructions were given on every conceivable point. Annual plants were to be collected before the ripening of the seed, biennials in the spring, and perennials in the autumn; twigs were to be of the present year's growth; the

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roots to be collected in the cold season; the leaves in the hot season; and the barks and woods in the rains. There were no fewer than twenty-six forms of medicine, including powders, extracts and boluses, decoctions and infusions in water and milk, syrups, expressions, distillations, fermentations, and medicated oils, many of them crude enough in their exhibition but wondrously efficacious in the respective ailments, for which they were designed. Not, however, until the quickening influence of British supremacy had been fully established in India was any notable attempt made, of which there is any record, to improve or to augment what was already known of the medicinal resources of this country. Sir William Jones' "Botanical Observations on Select Indian Plants," was one of the earliest contributions in this direction; John Fleming's "Catalogue of Medicinal Plants" (1810); Ainslie's "Materia Medica of Hindustan" (1813 and 1826); Roxburgh's "Flora Indica" in 1820, and the labours of Wallich, Royle, and later, of Drs. F.J. Mouat and F.N. Macnamara and other ardent botanists did much towards resolving the chaos in which they found the vast mass of material at their disposal into some degree of scientific arrangement." (Rai Bahadur Kanay Lall Dey, on Indian Pharmacology. Transactions of the fist Indian medical Congress, 1894, p. 25) p. 35-37.

26. *value of history*

"No science nor, indeed, any single form of knowledge can be properly appreciated apart from the records of its evolution; and it is as important to be acquainted with the erros and misleading theories which have prevailed in regard to it, as with the steps by which real progress has been made" (Wotton). Fuller remarks:

"History maketh a young man to be old without either wrinkles or grey hairs; privileging him with the experience of age without either the infirmities or inconveniences thereof. Yea, it not only maketh things past present, but enableth one to make rational conjecture of things to come. For this world affordeth no new accidents, but in the same sense wherein we call it a new moon, which is the old one in another shape; and yet no other than that hath been formerly. Old actions return again, furnished over with some new and different circumstances." p. 44.

"Professor Hamilton said that even in medicine, history repeats itself. The pathology of our forefathers was called 'humoral pathology'. It was supposed to have received its death blow by 'Celluar pathology'. Recent discoveries would seem to point to a revival of the humoral pathology of the past. The more we become acquainted with disease processes, the more we are convinced that no one system, however plausible, would explain the whole of them." pp. 45, 46. (*valid to tridosa siddhanta?*)

"History repeats itself; and one of the surest methods of avoiding error in the present and in the future is to cultivate an acquaintance with the mistakes of those who have preceded us on the difficult and uncertain path of progress and research". p. 47

"The German historian Karl Sprengel justly points out that many remedies re-discovered in modern times were referred to by Dioscorides. Among these are the application of wool-fat to wounds, external applications of castor oil, male fern against tape worms, elmbark for eruptions, horehound in phthisis, and lac for ulcers. Bottini (1837-1903) anticipated Lister by publishing a work on the use of carbolic acid in surgical operations; and he was one of the first to recognise the role played by parasitic organisms in the etiology of pathological conditions. Servetus and others seem to have anticipated the immortal Harvey in the discovery

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of the circulation of the blood, although without apparently realising its importance or significance. (*compare ancient Indian references on blood circulation as shown in the sections on śārira saśtra and nādīvignāna of this Anthology*).

Belloste (1654-1730) "was one of those writers whom Verneuil called the minor prophets of surgery. That distinguished surgeon said that if one had the curiosity to look into forgotten old books, it would be found that the majority of important discoveries, the fruits of which we now enjoy, belong not to the celebrities of the profession, but to men of whom the world knew little while they lived, who worked far away from the great centres of intellectual activity and who never wore the professorial purple." pp 52, 53.

"Idle pretence of superior success, haughty assumption of power of the instruments of precision for diagnosis and treatment, foolish confidence in vague statistical reports, are unworthy of the graduates of medicine. Be honest and straightforward. Then let the future take care of itself. It is neither always safe nor desirable to discard our old weapons as rusty and futile. Always remember that our present position is the outcome of the struggle of the different schools of medicine, the dogmatists, the empirics, the methodists, the galenists and a hundred other sects. It often happened that one theory was loudly proclaimed as excellent until another just as fallacious had arisen to overthrow it." p. 62.

"It appears to me," says Adams, "that, at certain periods of ancient times, the standard of professional excellence was such as would not easily be attained at the present day, with all our vaunted improvements in knowledge; and that many of those early masters of our art were distinguished for varied stores of erudition, an ardent love of truth, and an aptitude to detect the fallacies of error, such as few of us even now can lay claim to. The Father of Medicine held that, to become an eminent physician, it was necessary not only to be well acquainted with the structure of the human frame, but also to be skilled in logic, astronomy, and other science (De Aer. Aq., etc.) and of him it may be truly asserted, that he cultivated the art of medicine upon the strict principles of the inductive philosophy more than two thousand years before the world gave Lord Bacon the credit of introducing this method of philosophising. His devoted admirer and follower, Galen, was evidently the very beau ideal of an acomplished physician; skilled in all the sciences of the day, in logic, mathematics, rhetoric, and the first philosphy; to all these ornamental branches of knowledge he added a minute acquaintance with anatomy and physiology; a practical experience with the phenomena of diseases as diversified by climate, situation, and the varied modes of life; a singular perseverance in collecting facts; and an extraordinary ability for generalizing them". pp. 62, 63.

"Like all really great physicians", says Neuberger, "Hippocrates was far from shutting his eyes to the history of medical art, far from despising, in blind over-estimation of his own powers, the work of his predecessors, because it may have been faulty. In Ancient Medicine he writes: do not say that the old art of healing should be abandoned as of no account or as though its investigations were wrongly conducted; on the contrary, In maintain that its way of thinking came so near to truth that one should take it more into consideration and wonder at the discoveries made in spite of so great a lack of knowledge.' These words, which even to-day may be laid to heart, demonstrate, not alone the reverent disposition animating the master, but also the motive of that magnanimous action by which Hippocratism restored the discredited art of ancient days to its rightful position." p. 65.

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"Surely every age ought to endeavour to benefit by the experiments, whether successful or otherwise, of all preceding ones; instead of every generation commencing a new series of trial, and wandering over the same ground in search of truths which had been long ago discovered; or in stumbling throught the mazes of error without regarding the beacons set up by their forefathers to direct the footsteps of their descendants. If the wisdom of antiquity be entitled to high reverence in any case, it is surely so in medicine, founded as this art especially is on general observation and experience." Adams p. 169.

27. *utility of studying the Hindu system of medicine. p. 67.*

(Sections: 1. 'fresh' (?) ideas on origin of medicine - Gods - animals as instructors of medicine - reference from Atharva veda 2. some obsolete customs unknown to any other countries in ancient times and difficult to comprehend in modern ages are traceable here, e.g. *viṣa-kanyas* or poison girls, *śūka-doṣa,* temple sleep. 3. value of a few ancient therapeutic measures.

"The immovable apparatus" of the Greek and Arabian surgeons, as impoved by Seutin, Diffenback, and others, gives us great advantage in dealing with fractures. We find such methods described in the medical books of the Hindus centuries before they were known to the Greeks and Arabians." p. 86.

"The patent rattan cane splints, recently adopted in the European army, owes its origin to the bamboo splints recommended in Sanskrit medical books, and used by the Hindu surgeons in their practice from ancient times. Many of the ideas re-discovered and appearing from time to time as new and original, can be found to date back to the ancient Sanskrit works on the art of healing, and particularly in surgery." p. 86

Massage - "The beneficial results of such manipulations", says Despard, ""were well known to the inhabitants of Eastern countries and ancient documents testify to the fact that massage was practised by them many years before the birth of Christ." p. 87

Hypnotism - "The Hindus at a very early period seem to be acquainted with the obscure phenomena, called Mesmerism at the present day. The various modes of procedure employed by the western mesmerists to induce the hypnotic state, viz., staring fixedly at an object, gazing steadfastly into another's eyes, Luy's revolving mirror, and mesmeric passes - were known to the Hindus. Various methods are described in the Tantras for throwing a man into a trance by methods similar to mesmeric passes. Prof. Crookes in his Presidential Address at the British Association of Science has admitted that the force manifested in the phenomena of Spiritualism "exists outside our scientific knowledge and is exercised by intelligence differing from the ordinary intelligence common to mortals." p. 88, 89.

Exercise - " Breathing exercises are prescribed in Yoga systems. This method is well worth tyring especially in combination with other therapeutic measures." p. 89

"If Europeans cannot adopt their mode of life to a tropical climate but must indulge in habits totally incompatible with such a climate, they should at all events endeavour to convert their food into wholesome nutriment, and preserve the robustness of their frames by practising athletic exercises, in the cool of the day, and wrestling in imitation of the Puh'lwans. It is indisputable that these individuals enjoy an immunity from disease, unknown by others. These are none whose constitutions resist the exciting causes of diseases so well although blood is abundant and their vascular system vigorous. The few Europeans who have entered thoroughly into the spirit of these exercises return to their native land with vigorous

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constitutions capable of really enjoying that native country." p. 90

"For exercise Mr. Brett recommends: "The 'Moogdurs' the 'Dund'h' and the 'lezum', are the best kind of exercises for general use in India, though it would be well for a young man to go through the whole system at first under a regular 'Puh' lwan' and afterwards continue the Moogdurs, Dund'h and Lezum in moderation, as a high degree of artifical training may be carried too far; excess even in what is good, is to be avoided. Nothing is so conducive to a perfect capillary circulation, to the healthy action of the liver and of all the secretions, the tone of the stomach and the sthenic state of the nervous and muscular system enabling us to bear up against a long and sultry day. Friction and shampooing should not be omitted". F.H. Brett. A practical essay on some of the Principal Surgical Diseases of India. 1840. p. 90

4. *Indigenous drugs* - "There is a mine of drugs in this country. These are easily available and do not cost much. If the indigenous drugs are carefully worked out by men of special training, the result would be productive of great good to the human race", p. 90, 91

"The Sanskrit medical books are replete with the names of various medicaments, Such curative agents are still being used by the Ayurvedic physicians with success. The properties attributed to them require to be verified by us, before we accept or discard them in our practice. There are illustrations of the oft-repeated cases of wonderful remedies now most highly vaunted, short time later discarded as useless, only to be resuscitated at some future date as new discoveries. "By a study of the history of therapeutics, by a knowledge of the vicissitudes of fashion in the use of therapeutical agents, a lesson might be learnt teaching caution in the acceptance of new and much vaunted remedies, which might of themselves be of value, but come to be viewed with suspicion by the more cautious and sagacious members of the profession." p. 91

"On the value of knowlege thus gained, it is impossible to place too high an estimate, familiarising, as it will, the embryo practitioner with remedies which are at hand in the remotest corners of our Indian empire, rendering him in a great measure independent of costly imported articles, and effecting a considerable annual savings to the State." Waring" Pharmacopoeia of India, 1868, pp. ix-x.

e. *epigraphy and some miscellania*

(Epigraphic records connected with medicine, for instance from Epigraphia India are valuable to study the actual course of history. This however has not been studied by the author; this section comprises of just a few epigraphic notes and some miscellaneous matter concerned with historical aspects of medicine, taken from the various authors).

28. A Chola inscription indicates that at Tiruvaduthurai one mutt was attached to the temple solely for the medical students. The famous Tirumukkudal inscription, (is) frequently stated by the modern Siddha scholars as evidence for establishing the prosperous status of Science and Medicine in ancient Tamil Nadu. This inscription was made by Rajakesarivarman alias Viracholan in A. D. 1062.

The first inscription tells that the students were studying three works particularly, viz., *Aṣṭānga Hṛdayam, Vyākaraṇa* and *Rūpāvatāra*. It is well known that *Aṣṭānga Hṛdayam* is a popular and authoritiative book on Ayurveda.

(from Gurumnurthy, S. Medicial Science and dispensaries in ancient South India as gleaned from epigraphy. Indian Journal of History of Science, Vol. 5(1), 1970, p.77)

29. The second inscription gives information about the maintenance of a hospital

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and the particulars of payment for the physicians, the surgeons, the pharmacy men and the nurses. The medicines to be stored for one year have also been given clearly. They are twenty in number as follows: 1. *brahmyam kadumbori,* 2. *vasa haritaki,* 3. *gomutra haritaki,* 4. *dasamula haritaki,* 5. *bhallataka haritaki,* 6. *gandhira,* 7. *bālakeranda thyla* , 8. *pancānga thyla,* 9. *lasunādhyeranda thyla,* 10. *uttama karandai thyla* , 11. *sukla .....sa ghrita,* 12. *bilvādi ghṛta,* 13. *manḍukara vaṭika* , 14. *dravatti,* 15. *vimla,* 16. *suntri,* 17. *tamradi,* 18. *vajra kalpa,* 19. *kalyanala lavaṇa,* and 20. *pūrana ghṛta* . The names of the drugs in this whole list of medicines clearly show that they are confined to Ayurveda. Besides, the surgeon is mentioned in this inscription as " *Śalya kriyai saivon*". This *śalya kriyā* or surgery is a specific branch in Ayurveda. (Epigraphica Indica).

(The quotations 30-36 below are from "Civilisation in ancient India" K.C. Datta, 1886)

30. *Asoka's Edict II* "Everyone in Kingdom of Piyadasi beloved of the gods and also of the nations who live in the frontiers, such as the Cholas, the Pandyas, the realms of Sariputra and Keralaputra, as far as Tambapanni (and in the kingdom of) Antiochus, King of the Greeks, and of the kings who are his neighbours, everywhere the king Piyadasi, beloved of the gods, has provided medicines of two sorts, medicines for men and medicines for animals. Wherever plants useful either for men or animals were wanting, they have been imported and planted. Wherever roots and fruits were wanting, they have been imported and planted. And also public roads, wells have been dug for the use of animals and men. p. 7.

31. *Fahian's account of Pataliputra* "The nobles and householders of this country have founded hospitals within the city to which the poor of all countries, the destitute, cripple and the diseased may repair. They receive every kind of requisite help gratuitiously. Physicians inspect their diseases, and according to their cases order them food and drink, medicines and decoctions, everything in fact that may contribute to their ease. When cured, they depart at their convenience." p. 59

32. *Houen Tsang's account of Siladitya II (Harsha Vardhana)* "He was inclined towards Budhism, forbade the slaughter of living animals, built stupas, and erected hospitals in all the highways throughout India and stationed physicians there, and provided food and drink and medicine." p. 141.

33. *early notice of Indian Medicine by recent European workers* "As early as 1823, Professor H.H. Wilson published in the Oriental Magazine a brief notice of Hindu medicines and medical works. The indefatigable traveller and devoted scholar Csoma de Koros gave a sketch of Hindu medical opinions as translated into the Tibetan language in the Journal of the Asiatic Society for January 1835. Heyne and Ainsle also collected much information on the subject of Hindu medicines. And in 1837, Dr. Royle, of the King's College, London, combined all the information available from the above works, with many original researches of his own, in his celebrated essay on the antiquity of Hindu Medicine." p. 249

34. "The Greeks themselves did not lay claim to the honour (which is now often claimed for them by modern writers) of originating ancient culture generally, or the science of medicine in particular. Nearchus (apud Arrian) informs us that "the Greek physicians found no remedy against the bite of snakes, but the Indians cured those who happened to incur that misfortune". Arrian himself tells us that Greeks "when indisposed applied to their sophists (Brahmins), who, by wonderful, and even more than human means, cured whatever would admit of cure "Dioscordies, who lived in the first century A.D. is the most copious author on the Meteria Medica of

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the ancients' and Dr. Royle has in an exhaustive inquiry shown how much of his Materia Medica was of the Hindus (Antiquity of Hindu Medicine Pp. 82-104). The same remark holds goods with regard to Theophrastes, who lived in the third century B.C. while even the physician Ctesias, who lived in the fifty century B.C., wrote an account of India, which Dr. H.H. Wilson has shown (in a paper read to the Ashmolean Society of Oxford), contains notices of the natural products of India. But the chain of evidence is complete, when Hippocrates called the Father of Medicine, because he first cultivated the subject as a science in Europe, is shown to have borrowed his Materia medica from the Hindus. We refer our readers for evidence to Dr. Royle's excellect essay. "It is to the Hindus", says Dr. Wise we owe the first system of Medicine." p. 249-250.

35. "It will be of some interest to Hindu readers to know that twenty-two centuries ago Alexander the Great kept Hindu physicians in his camp for the treatment of diseases which Greek physicians could not heal and that eleven centuries ago Haroun al Rashid of Bagdad retained two Hindu physicians, known in Arabian records as Manka and Saleh, as his own physicians". p. 257.

36. "The fame of their works (viz. Caraka and Susruta) travelled into foreign countries, and the Arabs were acquainted with the translations of the work at the time of Harun-al Rashid in the eighth century. One of the earliest of the Arab authors, Serapion, mentions Charaka by name as Xarch. Another Arab writer, Avicenna, quotes him as Scirak; while Rhazes, who was prior to Avicenna calls him Scarac. It was thus that Hindu medical works, compiled as early as the Buddhist Age, were published to the world by the Arabs in the Puranic Age." o. 251-252.

37. *titbits (medical profession as a recognised engagement in so old a time as the vedas)*

कारुरहं ततो भिषग् उपलप्रक्षिणी ननना नानाधियां वसूवयो अनुगा इव तस्थम्।

I am a reciter of hymns, my father is a physician and my mother grinds (corns) with stones. We desire to acquire wealth in various actions. Rg. veda. IX. 112.3 (PVK)

The term *bhisag* (physician) comes in the list of the persons engaged in professions and crafts which had probably become castes or were in the process of becoming castes before the close of the vedic period, as seen from Vajasneya Samhita, Taittiriya Samhita, Taittireya Brahmana, Kathaka Samhita(17.30), Atharva Veda, Tandya Brahmana (111.4), Aitareya Brahmana, Chandogya and Brihadaranyaka Upanisad (PVK. 287.7-a)

Manu prescribes (x 47) the profession of medicine for the caste *ambaṣta*. Medicine was recognised as a curricular subject of education: *compare:* (Candrapida, the prince gets his educational training in subjects such as) architecture, science of medicine and the use of machines in Bana's Kadambari. paragraph 68 for Vidyamandira - (quotations from 38 to 40 below are from Rhys David, Buddhism)

38. "The Girnar edict of Asoka refers to the establishment of a system of medical relief so far south as Tamboparni (Ceylon)" - Ceylon J.E. Tennent. P. 504

39. "That in the 2nd century A. D. there were physicians and surgeons in the establishment of the great monasteries is amply proved by the references in the Minhintala Inscription (p. 505 Tennent) ... Asoka himself was able to found

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monasteries in Kerala by ... Friendly persuation (V.A. Smith. history of Ancient India. p. 185). The Buddhist Sannyasins settled down in Travancore in large numbers ... also devoted a considerable portion of their time and energy to cure diseases. In the Taluk of Shertalla in Travancore, there is a Thiruvizhai temple which must have been a Buddhisht Vihara once. Even to this day lunatics are treated with success .. the medicine .. is the juice of a ... herb .. grown profusely in the neighbourhood... There is another temple at Thakozhi in the Taluk of Ambalapuzha dedicated to Sasta where lepers are successfully treated. The medicine .. contains among other ingredients chaulmugra oil too. The prescription of the oil is preserved in the temple; the prepared oil is administered for a period according to the nature of the intensity of the disease". p. 10.

40. "Buddhist viharas were not mere places of worship; they were mostly educational Centres where knowledge of all kinds, material and spiritual, were given to the people in general and cures of all diseases were effected gratis.. When Hindus subsequently organised their temples after the model of the viharas, they retained the characters of educational centres, where religion was taught to the selected few". p. 12. Rhys David. Buddhism.

41. "It is very likely that the qartered sacrifical animals afforded excellent materials for the framing of comparative anatomy. Aitareya brahmana (VIII.1.) also VII. 13 contains special injunction for the quartering of such animals and we are told that the preceptors availed themselves of the religious meetings to demonstrate the lessons on practical anatomy".

42. "There is no gainsaying the fact, that historically, a host of Indian scientific ideas influenced the course of the history of science. Among them special mention may be made of .. Methodological concepts of medicine including the tridosa theory and surgical practices, the doctrine of five elements, conception of substance and the atomic views... The medical classics of Caraka, Susruta and Vagbhata were rendered into Arabic..."It was in surgery above all that the ancient Hindus excelled. Susruta described more than a hundred instruments. This was their greatest contribution to the art of healing and the work was bold and distinctive." (Guthrie). "The outstanding feats of ancient Indian surgery related to laparotomy, lothotomy and plastic surgery and plastic operations".

43. "Indian medical knowledge and surgical practices influenced in no small way those in Greece and Austria. The Hippocratic treatise, On breath, deals in much the same way... as we find in..... concept vayu or prana. Plato in his Timalos... discusses pathology in almost the same manner as....of tridosa ... Later in Arabia the Indian medical classics .. (were) translated into Arabic...The Chief priest (of Caliph) was... Barmak (who founded the) Barmak family ... responsible to a great extent for introducing Indian medicine, arithmatic and astronomy into Arabia.... Later Rhazes (865-925 A.D.) incorporated the Indian medical Knowledge in his comprehensive book..Liber Cont (Kitab al hawi). The Latin translation by Moses Farachi (13th Century A.D.) became a standard work" from Subbarayappa B.V. India's contribution to World thought and Culture. (*quotations 41. 43 above taken from this*).

44. *scientific methodolgy.* "A study of the Hindu Methodology of Science is absolutely essential to a right understanding of Hindu Positive Science, its strength and its weakness, its range and its limitations." p. 244

(*quotations B.N. Seal 44-47 taken*) from Positive Sciences of Hindus.

45. "If this is not undertaken Hindu Chemistry for example would be all practical

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recipe or all unqualified speculation. This however would be a very inadequate and indeed erroneous view of this early achievement of the human mind... the whole movement (here) was genuinely and positively scientific though arrested on an early stage."

Criterion or tests of truth (as employed in scientific thinking in ancient India) "The ultimate criterion or truth is found not in mere cognitive presentation but in the correspondence between the cognitive and the practical activity of Self, which together are supposed to form the circuit of consciousness. That knowledge is valid which prompts an activity ending in fruition".

प्रमाणतोऽर्थ प्रतिपत्तौ प्रवृत्तिसामर्थ्यात् अर्थवत् प्रमाणम्।

Proof and the measure of proof is that which is helpful in realising the meaning (of an entity) based on and in terms of proofs and is also meaningful in view of the operative efficiency. Vatsayana.

तदुक्तं तत् परिच्छिनत्ति अन्यद् व्यवच्छिनत्ति तृतीय प्रकारा भावं च सूचयति - इति एक प्रमाणव्यापारः

When such a (proof) is stated (about an entity), that itself would identify (the entity concerned, fully), *separate* it from anything else and also *suggest* the absence of any third type (apart from itself and the definitions, thereof). This is the absolute operativity of (what is called as) proof. Nyaya Manjari, by Jayanta.

perception. "Conditions of perception, its range and limits, were carefully studied. The minimum sensible (e.g. त्रसरेणु the just perceptible mole in the slanting sun-beam), infra-sensible (अनद्भूतरुप, सूक्ष्म, termed अतीन्द्रिय) the obscured (अभिभूत e.g. a meteor in the mid-day blaze) and the potential (अनद्भूतवृत्ति) are distinguished; but finer instruments of measurements were wanting and this was a principal cause of arested progress".

observation. (also refer Vacaspati and *Udayana*): "The entire apparatus of scientific method proceeded on the basis of observed instances carefully analysed and sifted. This was the source of the physics. Chemical theories and classifications, but in Anatomy they went one step faster; they *practised* dissection," etc.

"The observation was precise, minute and thoroughly scientific in Materia Medica, Therapeutics, Symptamology of diseases".

"Fxperiments were conducted for purposes of chemical operations in relation to arts and manufacturing, metallurgy, pharmacy, dyeing, perfumary, cosmetics, horticulture, glass making and polishing - Pliny".

Fallacies of observation. "These were carefully studied in relation to errors of observation and hallucination, भ्रम, अध्यास and आरोप which were ascribed to three causes: (a) दोष defect of sense organs (e.g. jaundice), or of necessary stimulus (e.g. light), (b) सम्प्रयोग presentation of a part of an aspect instead of the whole and (c) संस्कार the disturbing influence of mental predisposition, e.g. expectation, memory, habit, prejudice, etc.

doctrine of inference. अनुमान is the process of ascertaining not by perception or direct observation but through the instrumentality of medium of a mark, that a thing possesses a certain character. Inference therefore is based on the establishment of an invariable concomitance व्याप्ति between the mark and the character inferred. The Hindu inference is therefore neither merely formal nor merely material but a combined. Formal Material deductive-inductive process. It is neither Aristotilian

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syllogism (formal deductive-process) but the real inference which must combine formal validity with material truth-inductive generalisation with deductive particularisation.

An inference admits of a rigourous formal statement in the shape of five propositions for dialectical purposes (i.e. in demonstrating to others) or of three propositions when the inference is for one self स्वार्थानुमान (*as follows*):-

(1) the probandum, the statement of the proposition to be established (प्रतिज्ञा, साध्य निर्देश) e.g. "Yonder mountain is fiery." (2) the reason, the ascription of the mark ((हेतु, अंग. व्यपदेश, *here is*) e.g. "for it smokes." (3) the general proposition, stating the invariable concomitance which is the ground of the inference is clinched (*here*) by an an example "Whatever smokes is fiery as an oven" (उदाहरण). (4) next (*stage is*) the application, the ascertainment of the existence of the mark in the present case (उपनय). "Yonder mountain smokes" (5) finally, conclusion, the probandum proved (निगमन) "Yonder mountain is fiery". For oneself, first three or last three, tend to be sufficient.

The question (always posited) is: what is our warrant for taking the leap from the observed to the unobserved cases. Under what conditions are we justified to assert a universal real proposition on the basis of our necessarily limited observation."

46. *Science and religion* "So far as.. Hindu doctrine is concerned, every science is an integral part of the religious literature. There can be no question of any hostility between religion and science. Unfortunately, it is true in the western world, for some time, there was continuous animosity between the two but even there, the modern philosophers, the modern theologians and the modern scientists have come to a great deal....of agreement...The Hindu includes every secular subject.. as an integral part of religious literature. The first part of our vedas is called the Rg. Veda, and that contains what you call Ayurveda: a name for a combination of sciences which in modern medical terminology we would describe as anatomy, physiology, hygiene, sanitary science, medicine, surgery and so on. And this is not intended for the purpose of procuring, promoting the health of persons who have passed into another world. In this material world of ours, in these physical bodies of ours, we need health and strength and the sciences which concern themselves with these subjects are the part of the first of our *vedas*. Similarly, archery and various military sciences, constitute what we call as Dhanurveda.. a part of the second of our *vedas* (*yajurveda*). Thirdly we have the art and science of music. And fourthly, we have what is called *sthāpathya veda,* which includes higher mathematics, of every denomination, of every type, engineering, architecture and all secular sciences.

Relationship of the sciences with the main vedas:

Main Veda	Upaveda (Minor veda)	Vedānga (auxillary sciences common to all four Vedas)
Rg. veda	Ayurveda (medicine, etc.)	Śikṣā (pronunciation)
Yajurveda	Dhanurveda (military sciences)	Jyotiṣa (astronomy)
Samaveda	Gāndharva Veda (music)	Nirukta (lexicography and etymology) (grammar)
Atharvaveda	Sthāpathya Veda (architecture, etc.)	Kalpa (rituals) Vyākaraṇa" p. 116-117

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47. "The Hindu scriptures do not merely claim to ensure or to show us the path to salvation, heaven and so on after death, but take into account what we call the physical and other parts of the secular life and provide the necessary teaching, the necessary instruction in the various sciences themselves. In fact, all the material sciences or the secular learning as we may call it, will be found to be an integral part of the vedas,...There is no quarrel between any type of spiritual learning and temporal learning as something inherent in itself. Each person, according to his own taste, his own inclination, his own capacity and his potentialities for understanding and progressing can choose his own subjects and thereby he can attain the kind of satisfaction, the delight, the happiness which he seeks to attain and for attaining which he has the necessary congenial constitution and other capacities" pp. 159-159.

(From the culture of vedas N.K.V. Pantulu, Siddhabharathi. ed. Vishva Bandhu, Hoshiarpur, V.V.R. Institute, 1950)

48. "For several centuries, we have been harping upon the Vedas and the Vedangas, with the Vedanta as if the Vedic culture is all for the performance of yagnas.. It has brought to us the stigma that we are theorists and dreamers and our literature and ritual are all formalities with no significance or practical value.. We gradually lost our power of initiative in all the material aspects.. following the loss of .. independence. A glance at our liteature dealing with our kalas or arts is enough to convince one of the true material basis of our culture. Engineering, warfare, music and medicine ae spoken of not as kalas but as upavedas.. These four upavedas are the very corner-stones of our material existence. All the kalas, sixty-four.. and even more are variations and expansions of the tenets of these four upavedas. Medicine keeps the body up, engineering keeps the country in a good state, military science keeps the state efficient and strong, music which includes dance and many allied arts keeps up the social welfare of the nation. While Vatsyayana places stress upon the social arts, Sukra lays stress upon arts like surgery, ship-building, manufacture of machines and knowledge of mining, metallurgy, warfare, locomotion by land, water and air, etc.

Among the four vedas, Atharvaveda is intended purely for the material well-being.. Our independence has been lost through the disuse of the Atharvaveda in daily life and our being made to think and say that this great and first veda is all black magic and witchcraft". pp. 185-186.

49. "Dr. Hirschberg of Berlin says "The whole of plastic surgery in Europe had taken its new flight when their cunning devices of Indian workmen became known to us. The transplanting of sensible skin flaks is also an entirely Indian method.. The art of cataract couching which was entirely unknown to the Greeks, the Egyptians or any other nation. The cataract operations are, it is said, performed by Indian practioners with great success even to this day. The Hindus were also experts in performing amputations and abdominal section. They could set fractures and dislocations in men and beast, reduce hernia, cure piles and fistula in ano and extract foreign bodies. Inoculation for small pox seems to have been known to them from a very early age. Long before Edward Jenner was born, certain classes in India, especially cowherds, shepherds, charanas and the like had been in the habit of collecting and preserving the dry scabs of the pustules. A little of this they used to place on the forearm and puncture the skin with a needle. In consequence of this inoculation, the classes are supposed to have enjoyed in certain amount of immunity from small pox. Dr. Huillet, late of Pondicherry, assures us that "Vaccination was

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known to a physician Dhanvantari, who flourished like Hippocrates. The ancient Hindoos used to practice the dissection of the human body and taught it to their disciples. They knew human anatomy and something of physiology..."The Hindoo philosophers" say Dr. Wise "undoubtedly deserve the credit of having though opposed by strong prejudice entertained sound and philosophical views respecting uses of the dead to the living: and were the first scientific and successful cultivators of the...practical anatomy" - from H.H. Bhagwat Sinhjee. A short history of Aryan Medical Science. Gondal p. 178-179.

b. *reference from the Vedas*

(*Veda as the source of all knowledge, secular as well as religious* :)

50. अनादि निधना नित्या वागुत्सृष्टा स्वयं भुवा। आदौ वेदमयी दिव्या यतः सर्वा प्रवृत्तयः।।

In the beginning speech was set forth by the self-born, the beginning less and the deathless, a speech that was in the form of the vedas from whence issued forth all tendencies (and engagements of learning).

(Garudapūraṇa 223-21, Vāyu purāṇa Vol. I. 61. 69, and Viṣṇupurāṇa name the eightneen types of these learnings: 4. *vedas*, 6. *vedāngas*, purāṇa - which in turn are eighteen, *nyāya, mīmāmsa, dharmaśastra, upavedas* - which are three, *āyurveda, dhanurveda* and *gāndharva veda*, and *arthaśāstra* - after PVK p. 355)

apprenticeship.

विज्ञानमुच्यते शिल्पं हेमकुप्यादि संस्कृतिः। नृत्तादिकम् च यत् प्राप्तुं कर्म कुर्यात् गुरु गृहे।।

Engineering, culturing of gold as well as other metals (copper, brass, etc.), dancing and the like - the work done to learn these staying in the house of the teacher is called science. Brhaspati quoted in Smṛticandika II p. 195 (Miktākṣara or yagnavalkya smrti 11.184. regards Ayrveda as a *śilpa* to be learnt under an apprentice system; after PVK. p. 365)

("The (original) ayurvedic liteature available now is very scanty. Among the classics the compendia of the *ṛsis* or *ārṣa samhitas* come first. Of these *samhitas* only five are available till now. Even there, it is only two, *Caraka samhita* and *Suśruta Samhita* that are available complete, but actually in a redacted form. *Bhelasamhita* and *Kaśyapa samhita* are classicial Texts no doubt, but they were unknown till recently and have been published now and have become available in a fragmented and incomplete form. More or less similar is the state of Pālakapya Samhita a book on ayurveda for the elephants".. (under such circumstances,) "presuming that a relook of ancient Indian (general) liteature is relevant" to understand the early history and extent of Ayurveda, steps have been taken to study, collect, compare and corroborate whatever material available in them connected with Ayurveda. Ayurvedic University of Jamnagar has done pioneering work of literary research in this direction. - V.J. Thakar. Ayurveda in Yajurveda.

As against this, it should be noted that: (i) there is ample evidence in the *ārṣa samhitas* (many illustrations for this have been pointed out in this Anthology) that they had quite a consideable amount of *earlier* literature on which they have based their compilation, though further specifications here are not forthcoming. (ii) there is no reason why we should totally ignore the tradition that Ayurveda is traceable to

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Atharvaveda or Rg. veda and there was much bigger a book of Ayurveda by Brahma which became condensed later on. The historical problems would therefore be two: (a) to search for still earlier classics, (b) to locate the vedic texts connected with Ayurveda in any way and try to depict the growth of the ideas on such bases, from that point onwards. Quite exhaustive and classificed references to individual vedic Texts are available in the Introduction by Rajguru Hemaraja Sharma to Kashyapa Samhita, Satvalekar's Dīrgha jīvana and Ārogya from Atharva veda and Dandekar's Vedic Bibliography.

We conclude this section with (a) a reference for dissection of sarificial animals as seen in Aitareya Brāhmaṇa, a likely precursor of human dissection of Suśruta and others, (b) an account of ancient samhitas, presumed to be earlier than Caraka and Susruta) and (c) a benediction from Atharvaveda).

51. *dissection of animals - from Aitareya Brahmana*

(method of Dissecting animals) पशु विशसन प्रकारः श्रुति (तै. सं. कां. ७ प्र ३, अ ११,१२.)

अश्वस्य वाजिनस्त्वचि सूचीभिः शिम्यन्तु त्वा। अत्र भाष्यम् "वेगवतोऽन्नवतस्तव त्वचि विशसनाय प्रवर्तन्ते।

(Remove the skin and other organs of animals like horse by means of dissecting instruments.) The commentary here: They, the experts are engaged in removing the skin of the animals and dissecting certain useful portions which serve as oblations for sacrifices, and as food for men, with various instruments made of silver, gold and steel. (रजत हरिणी सीसाः) ताः "युजन संहिताः" युज्यन्ते कर्मभिः - कर्म सूचीभिः सुयोग्याः। (Fit for the purpose) क उ ते शमिता कविः मेधावी अवयव विभागज्ञः। (Who is able to dissect the body?) कविः (The expert in anatomy and dissection who knows well how to dissect carefully and how to remove the different organs of the body, and to study their nature, their composition and quality and their use). शिम्यन्तु "लोभ विचिन्वन्तु" "असिमार्गेभ्य उपजयन्तु।" (They may remove the skin and separate the wool in order that instruments may be as easily applied as they like into the body of the animal to be dissected.) ततः "स त्वा छ्यति-त्वा विशास्ति ते गात्राणि शिम्यति" सः त्वां (पशुशरीरम्) छिनत्ति। त्वां विशसति-भूयुक्तं करोति। तव गात्राणि शिम्यति=सुखेन विशसति अविनाशेन अंगानि विशस्य स्थापयति।

(The expert dissects the body carefully with sword-like sharp instruments, separates different organs, and keeps them unmutilated, for study and use)

"अध्वर्यवः छ्यन्तु-विच शासतु-गात्राणि पर्व शस्ते शिमाः कृण्वन्तु शम्पन्तः" अध्वरस्य नेतारः।

(Experts in anatomy and dissection take up different organs one by one, so much by so much and limb by limb for the purpose)

"ऋतवः" (proper time and place) पर्वशः (May help you to dissect part by part and joint by joint). बलिष्ठं सूदयन्तु (The expert may prepare, roast or season the best portions required for oblation).

विरुपं विशसितं विनाशयन्तु (And remove and destroy the useless portions. May air in the wide open space preserve the parts thus removed from co-agulation or decay and keep their quality intact and unchanged).

"परेभ्यो गात्रेभ्य अस्थभ्यो मज्जाभ्यः शमस्तु" एतेभ्यः सुखमस्तु।

(Thus be happy by knowing and having parts such as various major and minor organs, bones, marrow, etc. removed for the intended purpose)

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एतत्पद्धति मुद्दिश्य श्रुतिः - "तामुहा प्रोच्यैवास्माल्लोकादुच्यक्रमात्, तामुहा गिरिनाय बाभ्रव्याय प्रोवाच। ततो ह वै नामै तदर्वाड्. मनुष्याः अधीयन्तेऽधीयन्ते।

(Some divine being came to the earth, taught this science of anatomy and dissection, and disappeared. The first Rishi who learnt this science was Babhravya son of Giri and he taught the same to modern men who were qualified to learn, and they in their turn to their followers and so on. it is plain from this that the science of anatomy is a very ancient one).

इदं पशु विशसनतत्वं

(This is the dissection principle of animals). प्रथमं शातर्षिणा देव भागेन दुष्टमिति विज्ञायते। तथा चोक्तम् "तां वा एतां पशोर्विभक्तिं शातार्षिणार्देवभागो विदांचकार (ऐ.ब्रा.अ. ३१. सं. १)

(This separation of the animals was first known by Devabhaga Satarsi). Then the *rtviks* divide among themselves the previously dissected out parts. Now, this separation. We shall now tell this division: अनन्तरम् ऋत्विनः पशोर्भक्त भागान् स्वेभ्य एवं विभजन्ति। यथा - अथातः पशोर्विभक्तिः। तस्य विभागं वक्ष्यामः। हन् सजिहो (Chin with tongue) प्रस्तोतुः। श्येनं (श्येनाकारम्) वक्षः (chest) उद्भातुः। कण्ठः (Neck) काकुद्रः (काकुदः - Palate) प्रतिहर्तुः। दक्षिणा श्रोणिः (The right hip) होतुः। सव्या (Left hip) ब्रह्मणः। दक्षिणं सक्थि (Right hip joint) मैत्रा वरुणस्य। सव्यं (Left hip-joint) ब्राहमणाच्छं सिनः। दक्षिणं पार्श्वं (Right side muscle) सांसं (With shoulders) अध्वर्योः। सव्यं (Left side muscle) उपगातृणाम्। सव्योंऽसः (Left shoulder) प्रति प्रस्थातुः। दक्षिणं दोः (Right hand muscle) नेष्टः। सव्यं (Left hand muscle) पोतुः। दक्षिणा ऊरुः। (Right thigh) अच्छावकस्य। सव्यम् (Left thigh) अग्नीध्रस्य। दक्षिणो बाहुः (Right arm) आत्रेयस्य। सव्यं (Left arm) सदस्यस्य। सदं चानूकं च (पृष्टवंशः- Back bone or Spinal column) (मूत्र बस्ति - Kidney) गृहपतेः। दक्षिणौ पादौ (Right legs) गृहपते र्व्रतप्रदस्य (भोजनदायिनः) सव्यौ पादौ (left legs) गृहपतेर्भार्यायै। व्रतप्रदत्वं-एतयोस्सा धारणं भवति। तंगृहपतिरेव प्रशिष्यात् ज्याघनी (पुच्छं - the tail) पत्नीभ्यः तवायं तवादमिति विभज्य प्रदघात्। हरन्त्यः तां ब्राह्मणाय दद्युः। स्कन्ध्याश्च स्कन्धे भवाः पदार्थाः मणिकास्तिस्रश्च मणि सदृशा मांस पदार्थाः) कीकसाः (Bones) ग्रावस्तुतः तिस्र श्चैव कीकस्यः अर्धं वैकतस्यो नेतुः (प्रौढः मांसखण्डः) (ball of flesh). Aitareya Brahmana (after Sri Venkataramanacarya. Sanatana Vignana Samuccaya).

52. *early works on Ayurveda (based on the Chapter on Ayurveda in a work entitled Hindutva by Ramadass Gowd - in Hindi)*

("According to Caranavyūha, Ayurveda is an upaveda of Rgveda, though Ayurvedic works like Susŕuta, Caraka and Bhāvamiśra consider this as an upaveda of Atharvaveda").

The name, the author, the traditional age and contents of these works are:

1. Ayurveda by Brahma; one lakh *ślokas*, with 1,000 chapters "Prajāpati read this Aświnīkumāras read from him ; then Indra and Dhanwantari from Indra."
2. Aświnīkumāra Samhita: by Aswinikumara; 1 lakh 20,000 ślokas; the first *satyayuga* of *svayambhuva manvantara* ; 3 sections; *sriṣti varṇana* (creation), *prakṛti varṇana* (normalcy), *vikṛti varṇana* (aberration) 5 subsections, *adhyatmika tantra* (concerning soul and disease), *sthūla tantra* (concerning the gross description of diseases), *nidana tantra* (etiology), *pathya tantra* (technique of administering the wholesomes), *bheṣaja tantra* (technique of medication) - which is of four types - *parvataukasa* (from the mountains), *vanaukasa*, from the forests,

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jalaukasa from the water and *śābdika* from the words, viz., *mantras*. Diagnosing diseases by a study of handwriting, figures and aura.

3. Puṣkala samhita, by Puṣkala: 32,000 *ślokas* the ninth *satyayuga* of *svarocisa manvantara*, 4. chapters. 1. (cause of disease, contagious diseases, congential diseases) 2. (commitments and disease, which disease arises by which type of work, examination of the physician, the patient and the messenger) 3. (etiology, symptoms, prodromes, pathology and prognosis) 4. medicative measures).

4. *Agnīdhra sūtra rāja* 46, *ślokas*; 1st *satyayuga of svāyambhuva manvantara*; by King Agnidhra; 5. chapters: 1. (mercury and electrical energy) 2. (sulphur and use of sulphur in medicine), 3. (phosphorous and its use in medicine) 4. relation of diseases with these metals, prevention and cure of diseases, after-drinks). 5. (atomic explanations).

5. *Kurṇaka prabhā*. 12,000 *ślokas*; 1st *dvāpara* of *raivataka manvantara, Kraunca muni*. 2. chapters. 1. (sound and its relation to the body and the diseases) 2. (controlling of the sound, effect of water treated with sun's or moon's ray and taken as medicine).

6. *Dhātuvada* 60,000 *ślokas*; 2nd *satyayuga* of *svāyambhuva manvantara, Sainika ṛṣi*; 3 sections 1. (the 8 metals, their relation with the body) 2. (use of metals in curing aberrations as well as in *astra* and *śaśtras* viz., weaponry) 3. (maturation of metallic preparation with vegetable derivatives).

7. *Dhanvantari sūtra*. 10,000 *ślokas*; 1st *satyayuga* of *svaymbhuva manvantara*, 2 sections; 1(sleep, lassitude, langour and yawning) 2. (diseases - curse and cure).

8. *Mānā sūtra*, 9. *Saubhari sūtra*, 10. *Dālbhya sūtra*, 11. *Jābāli sūtra*, 12. *Indra sūtra*.

13. *Sabda kautuhala* 24,000 *slokas*; *Mainda rsi* 15th *dvapara* of *tamasa manvantara*. 3 sections. 1. (diagnosis of disease by sounds, examination of handwriting, musical instruments and curing diseases thereby; individual musical instruments for the diverse diseases separately) 2. (pharmacology) 3. (curing diseases by bathings and associations, recreations and the like).

14. *Devala sūtra*, 15,000 *ślokas*, *Devala*, second *dvāpara* of *tāmasa manvantara* 3. sections, 1. (mutual relationships) 2. (language) 3. (geographical diversities).

15. *Vanaspati Candrodaya*, 1,20,000 *ślokas*, ninth *satyayuga* of *tāmasa manvantara* by *Sesha nārāyaṇa*. 4 sections, all on Botany and medicine,

16. *Vanaspati vivarana* 60,000 ślokas by *Angira muni*; *12th Satyayuga* of raivata mavantara, 3 sections - all on Botany and Medicine.

17. *Dālbhya nighantu* 45,000 *ślokas* 16th *satyayuga* of *raivata manvantara* 2 section, Botany and Medicine.

18. *Rupārṇava*. 21,000 *ślokas*; *Chyavana ṛṣi*. *24th treta* in *raivata manvantara*. 2. sections, Botany and Medicine

19. *Rasārṇava* 1,25,000 *ślokas* 3rd *satyayuga* of *raivata manvantara*, 4 sections (Metal and medicine)

(*benediction*) - *from Atharvaveda* (*translation based on Satvalekar's Hindi rendering*)

53. भद्रादधि श्रेयः प्रेहि बृहस्पतिः पुर एता ते अस्तु।
अथेममस्या वर आ पृथिव्या आरेशत्रुं कृणुहि सर्ववीरम्।।१।।

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O Man, secure happiness, but follow more the path that would bestow upon you what is auspicious, than what is merely happy and secure a status of the most excellent auspiciousness. Whatever great nations are there in this world, let all types of brave people flourish in them and let their enemies be far removed. In other words, let peace of the most extolled nature get established in all countries. Kan. 7. su. 8.

शं नो वातो वातु शं नस्तपतु सूर्यः ।
अहानि शं भवन्तु नः शं रात्री प्रति धीयतां शमुषा नो व्युच्छतु ।।१ ।।

May Winds, Sun, Day, Night and Morning and all other entities be peaceful and favourable, to us. May our inner state be such that the world external will always be happy thereby and nothing in fact would be unhappy. Kan. 7. su. 69.

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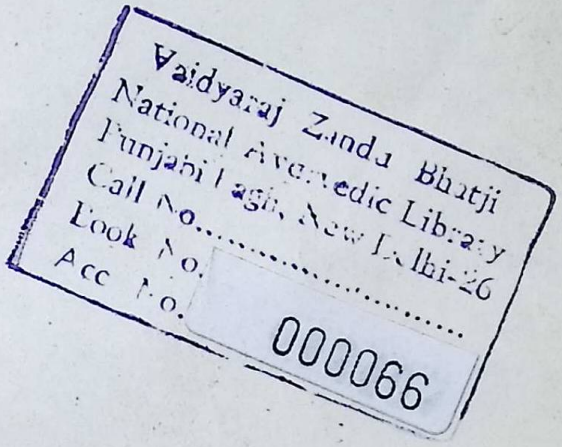

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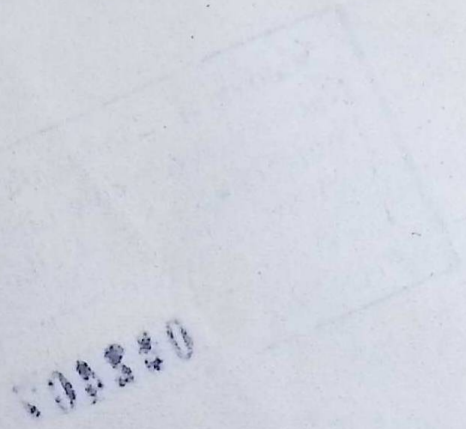

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